

The United States MILLER

AND THE MILLING ENGINEER.

Sixteenth Year.—No. 1.

MILWAUKEE, JANUARY, 1891.

Subscription Price, \$1.00 Per Year.

G. M. MANN.

F. P. MANN.

MILWAUKEE · BAG · COMPANY,

 — MANUFACTURERS OF —
 COTTON, PAPER AND JUTE

FLOUR :: SACKS

— DEALERS IN —

Grain Bags, Twines, Centals, etc.

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Capacity 2,000 Barrels Per Day. MILWAUKEE, WIS.

Manufacturers of Choice Minnesota and Dakota Hard Wheat Flour.

RYE + FLOUR

By most approved roller process, guaranteed the best and purest rye flour manufactured.

WE INVITE CORRESPONDENCE FROM CASH BUYERS.

"A PLEASURE TO OPERATE THEM"

THE RICHMOND

Grain Cleaning Machinery

AND DUSTERS.

TESTIMONIAL.

 LONGMONT FARMERS' MILLING & ELEVATOR CO.
 Longmont, Colo., October 15th, 1890.

RICHMOND MFG. CO., Lockport, N. Y.:

Gentlemen—Thinking that perhaps you would like to hear how we are pleased with the two Bran Dusters recently purchased of you, we take pleasure in saying they are doing more than we hoped for of them, and in the six months we have used them have given us no trouble, whereas the machines which they replaced were a continual source of annoyance.

We now have in operation in our mill: two No. 4 Richmond Horizontal Brush Machines; one No. 4 Richmond Horizontal Scourer; one No. 4 and one No. 5 Richmond Horizontal Bran Duster.

 Can say of these machines, it is a pleasure to operate them.
 Very respectfully,

LONGMONT FARMERS' MILLING & ELEVATOR CO.

SAM'L FRAZIER, Head Miller.

RICHMOND MANUFACTURING CO.
 LOCKPORT, N. Y., U. S. A.

Are you in it?


We guarantee a saving of 25 to 50 per cent in the cost of lubrication where our

Compression Grease Cups
 and **Badger Lubricants** are used.

SPECIALTIES:

Fine Cylinder and Engine Oils.

Extra Roller Mill Oil,

Magnolia Babbitt Metal

Mill Greases,

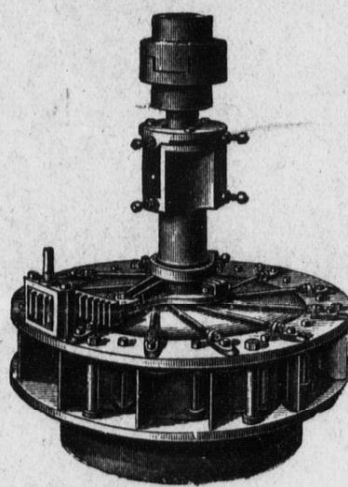
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MILWAUKEE, WIS. AND SEATTLE, WASH.



Correspondence Solicited.


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Made by JAMES LEFFEL & CO.

The "OLD RELIABLE" with Important Improvements, making it the

Most Perfect Turbine now in Use.

Comprising the LARGEST and the SMALLEST Wheels, under both the HIGHEST and LOWEST Head in this country. Our New Illustrated Book sent free to those owning water power.

Write us for NEW PRICES before buying elsewhere. New shops and New Machinery are provided for making this Wheel. Address,

JAMES LEFFEL & CO.,

Springfield, O., or 110 Liberty St., New York

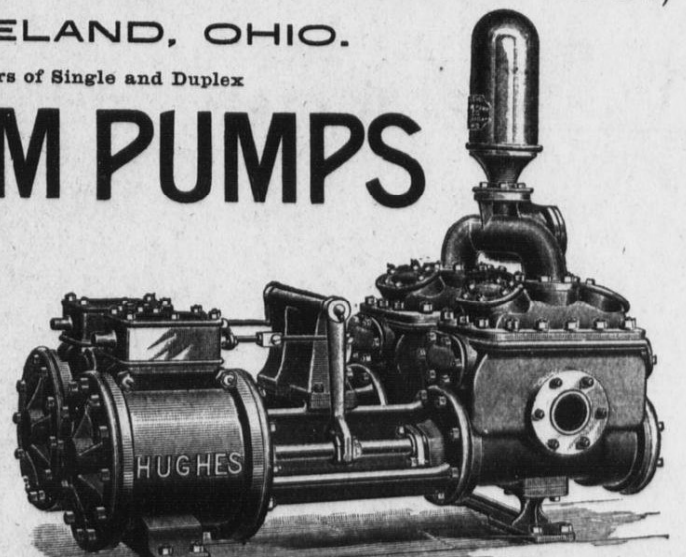
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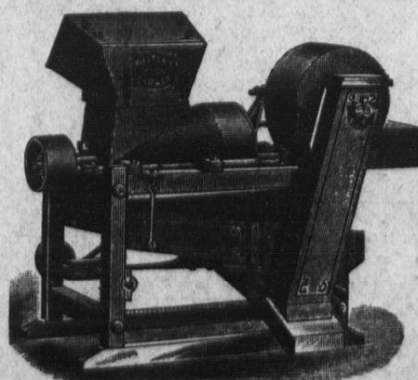
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 Of Every Description
 for all kinds of
 Work.

Satisfaction Guaranteed

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HUGHES IMPROVED DUPLEX FIRE PUMP.


"WESTERN"
MILL SHELLER.

 The most Compact, Durable, Best Sheller
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 Takes up but little room, runs at low rate of
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Best Sheller ever offered to the Public.

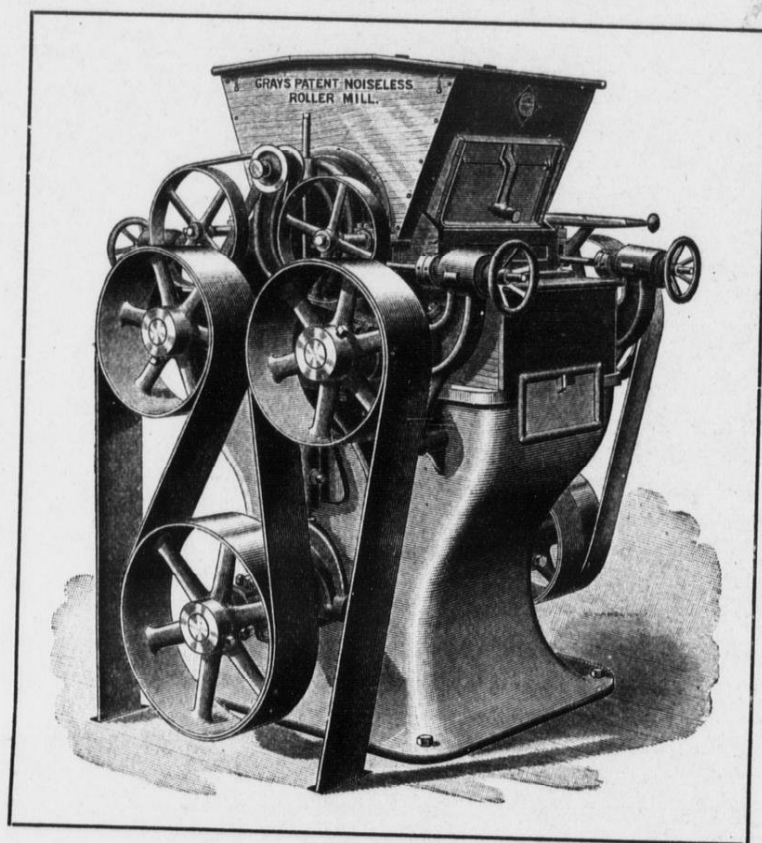
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UNION IRON WORKS, - DECATUR, ILL.

Mfrs. of "Western" Shellers, Cleaners, Separators, and all kinds of Elevator Machinery.

This is the Roller Mill

That
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revolutionized
the system
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THE EDW. P. ALLIS COMPANY

* Mill Builders and Mill Furnishers, *

RELIANCE WORKS, MILWAUKEE, WIS.

The United States MILLER

AND THE MILLING ENGINEER.

Sixteenth Year.—No. 1.

MILWAUKEE, JANUARY, 1891.

Subscription Price, \$1.00 Per Year.

[Written for the UNITED STATES MILLER AND MILLING ENGINEER.]

FALSE IDEAS OF ECONOMY IN THE EQUIPMENT OF A FLOURING MILL.

By J. F. MUELLER, M. E.

[Continued from December number.]

It is equally as important to have spouting lumber tongued and grooved or rabbitted as it is to have the elevator lumber thus finished. It will prevent leaks and dusting out, besides the time saved in putting together spouts made of material finished in the above manner will almost pay for the additional expense. Spouting as well as elevator lumber should in all cases be put together with screws. All mills are subject to more or less changes in spouting from year to year, and the old spouting can be made to answer in a great many cases. Where spouts are nailed, it is very difficult to take them apart, when found necessary, without splitting. The top board of a spout should be put on in such a manner as to be quickly removed when found necessary in case of a spout being choked. Some millwrights take great pride in putting up "diamond" shaped spouts. There are places where a spout of that pattern will fill the bill better than an ordinary square one, but in the majority of places the square spout answers every purpose, besides they are easier to put up and make a much better appearance. We more frequently find millwrights who are competent at putting up shafting and setting up machinery in general, than we find them competent spouters.

In the equipment of a mill, as a rule, nothing receives so little attention as the power connections, or that portion of the machinery which transmits power to the various special machines. A visitor cannot help being impressed with the general condition of things, immediately upon his entrance to the mill. Belting running in all conceivable directions, regardless of cut or grain, shafting out of line, etc. When any slipping or vibration occurs, it transmits itself to the special machines and will have a very serious effect. The greatest possible pains should be taken in putting up shafting securely. In this there is no little need of caution, especially where fuel cuts an important figure in the cost of production. And even when such is not the case, any one knows that when we subject a crank, arbor or shaft to too many unequal forces, the natural result is uneven wear. Machinery that involves all the principles demanded by a miller ought to be provided with driving power capable of transmitting a uniformly steady movement. We are now living at a time when the true strength of all kinds of material subject to all kinds of forces, ought to be thoroughly understood. It is far better to go to the extreme of

using material a little heavier than to take any risks.

It is not uncommon to find in a system of shafting many variations of speed, and nothing adds more to the irregularity of transmission. In many of our old mills, whose owners have struggled through the various stages of the times, this is particularly noticeable. There is in some cases an endless speeding up and down, that is, driving from a fast running shaft onto one of slow speed and again from a slow revolving shaft onto one running at a high speed. Several counter shafts driven one from the other in this manner will certainly produce a great loss of power.

All shafting should be provided with means for adjustment when thrown out of line by settling of building, shrinking of timber, etc. It is generally supposed that immediately after a mill is completed, everything is in proper line. However true this may have been at the time, it will be but a little while until every part of the mill has been more or less shifted out of its original position.

There are, in the majority of mills certain days of the year set apart for making necessary repairs, particularly at the time immediately before harvest when getting ready for the new crop. The lining up of machinery should also be looked after at this time. When bearings are made adjustable, as they should be in all cases, it will take but a short time to move them into proper line, without having to disconnect shafting and take same out of its bearings. The bearings should be of ample strength, that is there should be sufficient metal to securely hold each journal in its proper place. Machinery posts are sometimes very frail and flimsy looking sticks of timber. Good strong material for supporting shafting will in many cases brace up and stiffen an otherwise frail building. All journal boxes should be self-oiling. There are a great many in use, however, that are not worthy of the name—the oil chamber being nothing more than a drip basin for catching oil and in the event of a journal becoming hot, the chances for the oil reaching the bearing are very meager. A properly constructed self-oiling box when filled with oil, can be left without requiring a fresh supply for months, owing of course, to the size of the oil chamber. The beauty of a properly constructed, self-oiling box also is that there is no oil dripping out of the ends and running down posts and over the floor.

Many gears have been removed and thrown away, and belt drives put in their place because the gears were thought to be consuming unnecessary power. I am not as a rule an advocate of gears, however, I consider stiff gear-ing better than a large portion of the

belting in present use. The cumbersome gears, at any rate, will perform their duty, at least so far as holding shafting to proper speed is concerned, even if for the time being, it be at the expense of the coal pile. In many of our modern mills, if belts of sufficient width and quality were used, the engineer would find a considerable load added to his engine. It has been found that many belts, or rather the belt makers, have been condemned, when really they were innocent, the cause of failure being the parsimony of purchasers, who expect fifty horse power from thirty horse power belts. It is a common error to thus economize on the first cost of belting. The small amount saved is soon lost by the stopping of machinery caused by the slipping of belts, strain on the shafting, increased friction, and rapid destruction of the belts themselves. In such cases the belt is not to be blamed for the little work done, and great consumption of fuel.

A great many millers seem to have horror of slack in a belt. Some of the best belts while seemingly very slack, run and do their work in a very economical and satisfactory manner. A great many belts are injured by the application of tighteners. A tightener is a valuable contrivance when it is used on belts that are calculated to perform their work without being overstrained. A tightener should only be applied when practical tests have proven that the belt is not doing all the work it can do without injury to its fabric. To make a belt accomplish its work up to its full capacity, is to exclude air between it and the face of the pulleys.

Many points about the machinery connections could be enumerated that receive very little attention the year round. It ought to be great satisfaction to a miller, after making a series of practical tests, to know that he is making a barrel of flour out of a limited amount of wheat. It would also help largely to show up the credit side of the ledger account at the end of the year, if now and then a series of practical tests were undertaken to determine the full measure of power, and making adjustments accordingly. Of course no flexible rule can be laid down that will govern all conditions, situations and nature of machinery.

The conclusions to be drawn from the principles and theories which have so often been presented and from the examples in practice, are obvious and definite. To secure the highest possible efficiency of machinery and maximum economy in the operation of establishments in which it is employed, none but the best material should be used, and it should be of sufficient strength, rather a trifle above than below the actual strength required.

[To be continued.]

MICHIGAN MILLERS.

THE annual meeting of the Michigan Millers' Association was held at Lansing, Mich., Jan'y 8, 1891, with President Knickerbocker in the chair and Sec'y Reynolds at his post of duty as usual. Representatives of 38 milling firms were present, also Mr. Frank Barry, Sec'y of The Millers' National Association and D. H. Ranck, Esq., editor of *The Millstone*. The Secretary and Treasurer's report was read and showed the organization to be in a flourishing condition both as to finances and membership. Several encouraging letters acknowledging the value of the Association to Michigan millers were read, having been received from members who were unable to attend. Insurance matters were discussed at some length. The Association concluded not to further agitate the subject of State grain inspection. The matter of adopting the use of paper-sacks in place of cotton was considered favorably and the paper-sack agents, a number of whom were present, were invited to present samples and prices. The Association finally concluded to award a trial order to a manufactory of paper-sacks at Irwin, Pa. Weekly reports were ordered to be continued during the year.

The President called attention to a resolution adopted by the executive committee of the Millers' National Association, December 16th, 1890, and now being circulated among the members of that association for signatures. The resolution being read, and some explanations made regarding it by Secretary Barry, Mr. Voigt moved, that it be declared the sense of this meeting that the resolution be enforced by the members of this association, which was carried. The resolution is as follows:

Resolved, That from and after February 1st, 1891, all sales of flour shall be made for shipment within fifteen days from the date of purchase, unless otherwise specified in the order, as entered at time of sale, and that a charge of five cents per barrel for each fifteen days or fraction thereof, beyond that time, shall be made until the order for shipment shall be given by purchaser.

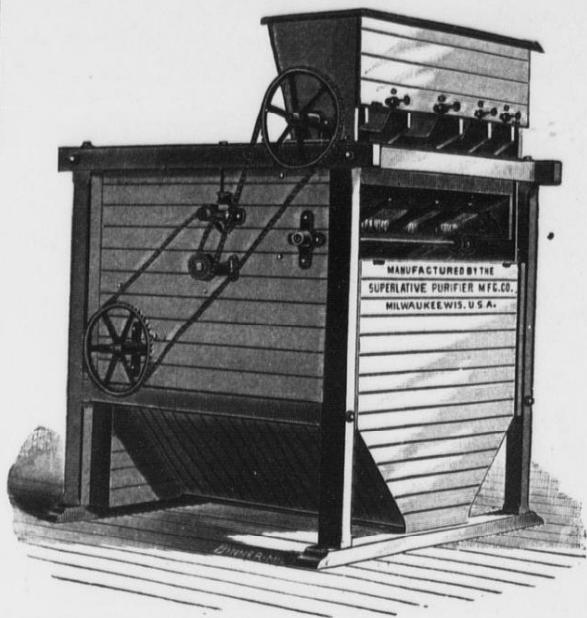
The officers of the Association were re-elected for another year, Secretary Reynolds compensation being increased to \$1,500, the Association to pay \$1,000 and the Michigan Millers' Mutual Fire Insurance Co. to pay \$500 and all traveling expenses and furnish office room, according to their own proposition. The Constitution and by-laws were thoroughly discussed and so changed as to formally ally the Association with the Millers' National Association. Sec'y Barry addressed the meeting in a few well chosen remarks on timely topics and Editor Ranck read an able paper which was warmly received.

"Is Just a Little Wonder. Has Improved the Color of our STRAIGHT flour TWO SHADES, and INCREASED PATENT TEN PER CENT."

THE MACHINE REFERRED TO IS

THE NEW ERA SCALPER

Does not scour the bran. Requires little power and occupies small space.



One machine handles 4 breaks in 100 bbl. mill or 1 break in 500 bbl. mill.

DETROIT FLOURING MILLS.
JOHN CLEE.

DETROIT, MICH., November 28, 1890.

SUPERLATIVE PURIFIER MFG. CO., Milwaukee, Wis.:

Gentlemen—The New Era Scalper we bought of your Agent, Mr. C. A. Smith, two months ago, is just a little wonder. It is doing its work to perfection, and the power required is comparatively nothing along side the Hexagon Scalpers that we threw out and replaced with your machine. It has improved the color of our straight flour more than two shades, and it has increased our patent 10 per cent. In fact, I cannot say too much in praise of its work, and I hope that it will meet with great success throughout the milling public.

Yours truly,

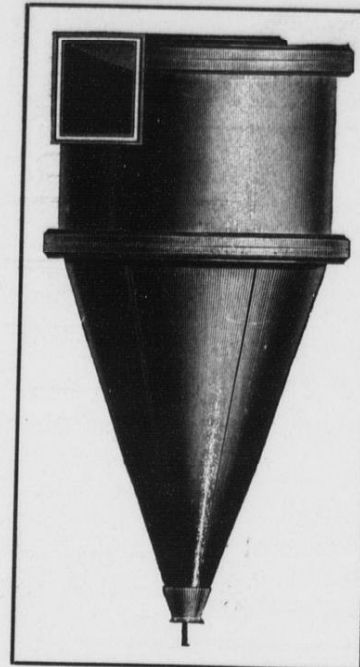
E. G. BEASELY, Head Miller.

FOR CIRCULARS, PRICES, ETC., ADDRESS

SUPERLATIVE PURIFIER MFG. CO.,
MILWAUKEE, WIS.

THE VORTEX DUST COLLECTOR

WELL BUILT
AND FINISHED.
GUARANTEED
TO DO
FIRST-CLASS
WORK, AND
TRIAL ALLOWED.
PRICES LOW.



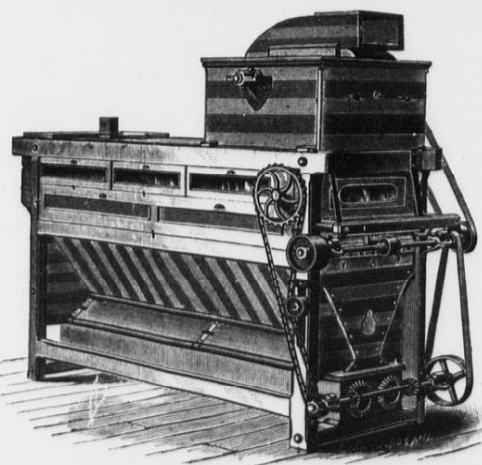
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IT INFRINGES ON
NO OTHER
MACHINE, AND
WE GUARANTEE
EVERY USER
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AGAINST SUITS.

Thousands in use in all parts of the country on
Purifiers, Grain Cleaners and other dust
producing machines.

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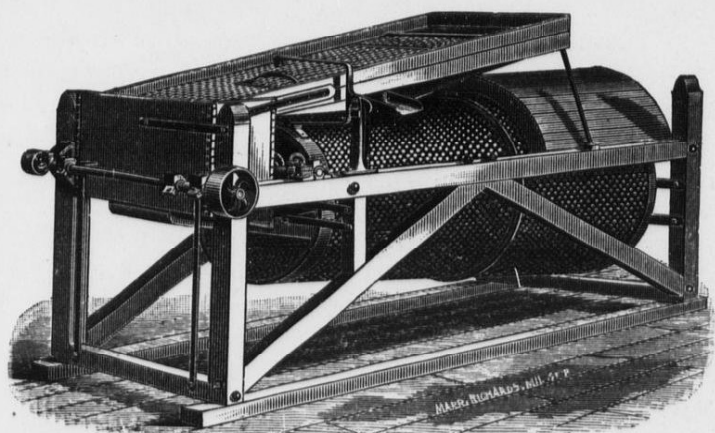
WELL BUILT AND FINISHED.

Thousands in Use. * * * Trial Allowed.

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SUPERLATIVE PURIFIER MFG. CO.,
MILWAUKEE, WIS.

The Kurth Cockle Separator



Manufactured in three styles, with either reel or shaking
grader, as may be desired.

ALSO MANUFACTURED IN COMBINATION WITH

Richardson's Dustless Oat Separator Attachment.

We are prepared to furnish Steel Cylinders, if desired.

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COCKLE SEPARATOR MFG. CO.,
MILWAUKEE, WIS.

UNITED STATES MILLER
AND THE MILLING ENGINEER.

E. HARRISON CAWKER, EDITOR.

PUBLISHED MONTHLY.

OFFICE, No. 124 GRAND AVENUE, MILWAUKEE.
SUBSCRIPTION PRICE—PER YEAR, IN ADVANCE.
To American subscribers, postage prepaid..... \$1.00
To Canadian subscribers, postage prepaid..... 1.00
Foreign subscribers..... 5s.
All Drafts and Post-Office Money Orders must be made payable to E. Harrison Cawker.
Bills for advertising will be sent monthly, unless otherwise agreed upon.
For estimates for advertising, address the UNITED STATES MILLER AND THE MILLING ENGINEER.

[Entered at the Post Office at Milwaukee, Wis., as mail matter of the second-class.]

MILWAUKEE, JANUARY, 1891.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER AND THE MILLING ENGINEER. You will thereby oblige not only this paper, but the advertisers.

MILWAUKEE AMUSEMENTS.

DAVIDSON OPERA HOUSE—Every evening, Saturday and Sunday Matinees.

BIJOU THEATER—Every evening, Wednesday, Saturday and Sunday matinees.

ACADEMY OF MUSIC—Every evening and usual matinees.

STANDARD THEATER—Every evening and usual matinees.

PEOPLES THEATER—Every evening and usual matinees.

GERMAN STADT THEATER—Regular performances Wednesday, Friday and Sunday evenings.

LAYTON ART GALLERY—Free Tuesdays, Thursdays and Saturdays. Admission 25 cents on Wednesdays and Fridays.

PUBLIC MUSEUM—Open daily. Exposition building. Visitors to Milwaukee in either summer or winter cannot fail to find amusements suited to their taste.

THE Nebraska Millers' Association met at Lincoln, Neb., Jan. 15 and 16.

W. L. MANSON, representing *The Millstone* of Indianapolis, Ind., made us a pleasant call on the 13th inst.

THE Silver Creek, N. Y., "funny paper" has made its appearance. No casualties are reported so far under the head of "tickled to death."

THE Millers' Mutual Insurance Co., of Wisconsin is reported to be in good circumstances both as to financial condition and amount of patronage.

WHO would have thought it? It is said that the great works formerly the property of the Geo. T. Smith Midlings Purifier Co., are to be turned into a manufactory of oil stoves.

MILWAUKEE mill-builders and furnishers are favored with plenty of work, and there is no lack of orders at any of the establishments. A good business year is anticipated.

THE Iowa Millers' Association meet in Des Moines, Iowa, Jan. 21, 1891. Headquarters at the Savery House. A large attendance is expected. J. T. Sharp of Des Moines is Secretary and E. A. Consigny, President.

THE U. S. Department of Agriculture, Department of Entomology will soon import a considerable quantity of *Semiotellus nigripes*, a Russian parasite of the Hessian fly, in order to endeavor to acclimatize it in the United States.

BRO. HALL of the *Modern Miller* bought to write an article entitled: "What I Know About Corn-Shellers." In a late number he illustrates one, showing the corn and cobs flying towards the sky, regardless of the law of gravitation.

OUR Milwaukee Chamber of Commerce refuses indignantly to abolish the wheat pit. Its cause was championed in a tear-starting oration by our old friend J. W. Bass. The members were silent as if spell-bound by his eloquence and even the old clock almost stopped ticking. At the conclusion of

his speech the integrity of the "pit" was maintained by a rousing *viva voce* vote, and the old clock struck for joy. "Why" said an old member "you might as well try to play Hamlet with *Richard the Third* left out." *The pit will remain.*

SOME Wisconsin Millers object to grinding Japanese buckwheat. They say it makes bitter flour. They will find that if they use the modern buckwheat machinery they can make good flour. New York and Pennsylvania millers find no fault with it.

MICHIGAN millers have without doubt an able, enterprising and active secretary. We wish the secretaries of the Associations in the other states would follow his example. It would mean a great deal for the welfare of the trade throughout the country.

THE question of building and operating their own telegraph lines is being agitated in the several boards of trade throughout the country. It is asserted that the members of the exchanges could save themselves a vast amount of expense by building their own lines.

AT present we have but one regular special technical writer outside of our office (Mr. G. F. Mueller,) contributing to the *United States Miller*. He is an able writer and his articles written for us have been quite extensively quoted. We commend his articles to the careful study of our readers.

OAT-MEAL millers are again endeavoring to organize a trust. This time it will be known as the American Cereal Co., and will be heavily capitalized if the organization is perfected. We doubt if the organization can be carried to a successful conclusion, as there are too many oat-meal mills in the country, many of which will remain outside and take the consequences.

WE desire to call the special attention of our readers to the valuable nature of our letters from Regular Correspondents. We have taken great pains and spent a good deal of money to secure the best writers on milling subjects, commercially considered, in Great Britain, Baltimore, Buffalo, St. Louis and other points, so as to give our subscribers a correct view of things viewed from local stand points. Some of these letters have created a good deal of comment, and they have been looked for anxiously as our publication day approached.

IN a recent number we referred to the instability of mutual insurance companies and predicted the early demise of some of them. In this connection we note the appointment of a receiver for the Buckeye Mutual Insurance Co. of Ohio, and the Wisconsin and Milwaukee Mutuals of Milwaukee, Wis., and we do not know how many others. There is reason to believe, however, that the Millers' Mutual Insurance Co., of Wisconsin, and the Millers' National of Chicago will be able to stand any pressure that may be brought to bear upon them. Good insurance like good property or service of any kind, demands a fair price, and must have it. A mutual company may start out and run along for two or three years without meeting with many material losses, and the policy holders imagine they are making a big saving in cost of insurance, but practically there is no saving in the long

run. Millers or any one else desiring to take out insurance should thoroughly satisfy themselves of the stability of the companies to whom they entrust their business, whether they are mutual or stock companies. It is the only safety valve. The trouble with the Milwaukee companies seemed to be from a sudden scare of the insuring public, and consequent dropping off of patronage.

THERE are over 15,000 millions dollars in currency in actual circulation in this country; outside of the U. S. Treasury, showing a gain about three times as large as the gain in population, and yet a class of people imagine that a great amount of money issued by the government would be of great benefit to the commercial interests of the country. It is the "Greenback" theory revived under new auspices. This class of enthusiasts want a "cheap dollar" to pay the indebtedness of an honest dollar. Such a scheme can never be of any practical benefit to our citizens as a whole and merits the condemnation of all honest men. Above all things let us take no step that will depreciate the value of our currency in the eyes of the world or of ourselves. A round plug can never fill a square hole.

THE *Modern Miller*, Kansas City, Mo., publishes the following item in its January number:

There are owned and controlled in this city twelve elevators with a total storage capacity of 3,765,000 bushels, an increase over last year of three elevators with 1,800,000 bushels storage capacity, and there is a prospect of two or three being built the coming year. Below are the names of the elevators now in the city with their capacity:

NAME.	STORAGE CAPACITY, BUSHEL.
Union	400,000
Arkansas Valley	425,000
Alton	175,000
Kansas	125,000
Novelty	250,000
Inter Ocean	150,000
Armourdale	250,000
Union Pacific	1,000,000
Santa Fe	750,000
Kaw	40,000
Argentine	75,000
Pacific	175,000
Total	3,765,000

SOME effort is yet being made to carry out the proposed millers excursion to Europe. Whether any greater number of millers will go across this year than other years we do not know, but it would be pleasant if a considerable party could go at the same time on the same boat. If the weather should prove rough the scenes of a former excursion of millers on Lake Michigan from Chicago, would be vividly brought to mind. We hope the artist of the *Honest Miller* will be on board with his little Kodak. It is reported that Bro. Edgar is raising side-whiskers, practicing the "trooly Henglish haccet." under competent instructors and rehearsing his "parle vous" for the occasion. Ranck of *The Millstone* is said to have ordered some fine large shark-hooks to add to his fishing tackle which he intends to use on the way over. Bro. Mitchell is reported to be writing an essay entitled "How to make British Milling Pay—Subscribe for the American Miller." Bro. Hall of *The Modern Miller* will, they say, go armed in the regulation Colt's Navy style, and orate a warning to British syndicates to keep away from Kansas City, but his English hearers will doubtless consider it "Just han Hamerican joke, don't ye know."

Laying all jokes aside, we sincerely hope that if the excursion excerts it will do it in "bang-up American style" and

be productive of good, mentally, socially, morally and physically to all who partake therein. Mr. L. Maygrove the British correspondent of the UNITED STATES MILLER at London will be able to give first-time visitors some valuable points for their edification and instruction.

A DECISION of considerable importance to millers was recently made by the Arbitration Committee of the New York Produce Exchange. This case has attracted more than usual attention because of the original refusal of the milling company to arbitrate, because of the question whether their agent was such or acting as principal in the transaction involving the question in dispute, and because the milling company at first denied the jurisdiction of the Exchange, as it was not a member of the Exchange. It was brought by the English shipper, F. E. Hadley, against the Sanderson Milling Co., of Milwaukee, Wis., for breach of contract and damages for delay in delivery of flour sold to arrive, and the Arbitration Committee decided that such breach had been committed, allowed the claim of Mr. Hadley and gave him judgement for the \$1,357.15 in full of his claim. The decision of the Complaint Committee originally was that the milling company, though a member, must submit to arbitration. As the penalty for refusal was the exclusion of the flour of the mill from sale on the Produce Exchange by its agents or any member of the Exchange, the milling company reconsidered its refusal to arbitrate, and the above decision therefore was upon a submission by both parties of the case.

WE are gratified to be able to note the organization of another Milwaukee company whose business is bound to grow to immense proportions. Its name is The Shaw Electric Crane Co. Traveling cranes used for moving and carrying heavy articles from one part of a shop to another, or for loading or unloading heavy machinery on cars have been in use many years, but the Shaw electric crane simply discounts them all in general efficiency. The implement was invented nearly three years ago in the E. P. Allis Co. works, in this city. It was a result of a breakdown of one of the kind in general use. Mr. A. J. Shaw was then a designer in the Allis works. Superintendent Reynolds requested him to prepare plans for a crane which would be durable and do good service, and the Shaw electric crane is the result. One was built and put in use. In speaking of it Mr. Reynolds said:

"It is the only really practical traveling crane in existence. The one first built has been in use in this shop two years, and has worked perfectly, almost day and night, during the entire time, and the expense of keeping it in order has been simply nothing, whereas others are almost constantly getting out of order. A year ago we put in the second one, and a third one is now being built. The electric crane will do double the work of one of the others in the same time and at much less expense. There is not a doubt of the absolute practicability of the new crane or of the success of the new company. The extent of its business will simply be limited to its capacity to meet demands. The electric crane is sure to take the place of all other traveling cranes speedily. No shop can use the slow ones and compete with an establishment equipped with the new ones, hence the business of manufacturing them must be a success."

As soon as the location of the works is decided upon, which will probably be in the new manufacturing district in the the northwestern portion of the city, work will immediately commence on the necessary buildings. The enterprise will give steady employment to 100 mechanics from the start.

MILLERS NATIONAL ASSOCIATION.

Semi-annual report of Sec'y Barry—It shows a good state of affairs—Increased membership—Patent litigation—Tariff bill—The Export Bill of Lading — A proposed Export-Bureau — Miller's transportation association, etc., etc.

SECRETARY Barry, of the Millers' National association, has completed his semi-annual report to the members. The report says there is an increase of thirty-four memberships, with fifty-nine units of 100 barrels, daily aggregate capacity, which is certainly encouraging. The above figures demonstrate a point worthy of note. The thirty-four firms which have recently joined with us have an aggregate capacity of but 59,000 barrels per day, and one of these concerns makes 1,000 barrels daily, so that an average for the remaining thirty-three firms is but about 150 barrels each per day. As a matter of fact, twenty of these mills make less than 100 barrels per 24 hours. This goes to show that many millers of smaller capacity are beginning to realize the fact that this association is of just as much practical benefit to a small manufacturer as it is to the larger one, and that they are willing to join hands for the common good, and recognize their obligation to take part in supporting an organization which has worked so much good for all millers of the United States.

I view of the fact that the association had not called upon its members for one cent of money from Jan. 31, 1883, to June 16th, 1890,—a period of seven and one-half years, and that the accounts of members who paid this last assessment were technically in good standing up to June 16th, 1890 the recent call demonstrated the fact that some of our memberships, as they appeared upon the books, were really dead, the firms having gone out of business. It is gratifying, however, to note that we have, within the past two years, gained more members than we have lost during the last seven and a half years. The association today stands larger and stronger in point of daily output of its mills than it ever did before—even during the times of the patent troubles, 1877 to 1883—the aggregate capacity of members being about 150,000 barrels of flour per day.

A suit was reported on the part of one Wm. E. Lee vs. C. A. Pillsbury & Co., for alleged infringement of his patents, in the use of the cockle machines manufactured by the Cockle Separator Manufacturing Company, of Milwaukee, Wis, the defense being furnished by the manufacturers of the machines. The association has kept careful watch of this case, and will guard the interest of its members.

Another suit which attracted some interest last summer was that of J. H. Russell vs. J. O. Kendall & Co., of Hartford, Wis., Mr. Russell claiming that he had some seventeen years ago purchased the exclusive right in certain states to manufacture and vend middlings purifiers under the George T. Smith patents. The National association has interested itself in the defense of this suit, which is now resting in peace, and Mr. Russell will doubtless not be heard from again. A number of minor threats of patent litigation have been reported during the past few months, but no new suits have been entered, and patent matters seem to be peaceful for the present at least. This quiescent state is undoubtedly due largely to the existence of our organization, and the knowledge on the part of

owners of bogus and invalid patent claims, that they cannot pursue an aggressive policy against millers unmolested. The association stands as a menace to this class of swindlers, and insures millers against their attacks.

As reported at the last convention this association was then engaged in an active lobby, during the framing and passage of the so-called "McKinley Tariff bill," in order to secure the reduction of duty upon jute and burlaps. Our efforts proved very successful and, though the most powerful influence was brought to bear by the combined American manufacturers of jute goods, to have the duty upon imported burlaps placed at a figure which would give them a monopoly of the jute bag trade, through the co-operation of our members, in responding to the call of the secretary to appeal to their members in congress for support of our interests, we succeeded in getting burlaps, such as are used for bags, placed at the lowest figure in their schedule.

The constant agitation of the subject of a new and fairer export bill of lading which has been kept up by the Association and its friends, has led to some slight improvement in the service rendered by the transportation companies. At the recent meeting of the Executive committee, careful consideration was given to the subject of organizing an "Export Bureau" for members of the National association, the idea being to establish a central office, to which each member may, when desired, report an export shipment, when forwarded, the same be traced to destination. Agents will be placed at all the principal points of trans-shipment throughout the United States and at the seaports. These agents will be immediately advised by the central office of the shipments which are coming their way, and it will be their duty to watch for and promptly report the arrival, transfer and forwarding of the flour. When the central office discovers by its recorders that a shipment enroute is suffering delay, communication will at once be had with the railroad which is at the time responsible, and the shipment may thus be started up and hurried on its way. The agents at the seaports will look after prompt transfer from the cars to steamers, and thus the provoking delays which have done so much to injure our export trade may be obviated. For this service the Export bureau will charge a sufficient fee per barrel simply to pay for its operation. A basis for such fee can only be arrived at by experience, and in order to establish the bureau, the flour exporters of our association who may wish to join in this organization, will be asked to sign a small guarantee fund and state approximately the amount of flour which they will want traced thus. It is hoped that members interested will give prompt and hearty cooperation in this scheme. If the association can, through organization of this sub-association, benefit the export flour trade of the United States, all millers will be directly benefitted thereby, as results of over-production will then be felt less in the domestic markets. The Executive committee adopted a resolution on Dec. 16., permitting A. M. Bailey, of Minneapolis, to present on June 15. a plan in detail for the organization of a Millers' Transportation Association, to be conducted under control of the Miller's National association, and at that time to furnish definite information relative to the amount of a guarantee fund which

could be secured for its support during the first year.

The Executive committee at its last session instructed the secretary to submit to all members of the Association the following resolution applying upon domestic flour sales:

Resolved, that from and after Feb. 1. 1891, all sales of flour shall be made for shipment within fifteen days from the date of purchase unless otherwise specified in the order, as entered at time of sale, and that a charge of 5 cents per barrel for each fifteen days or fraction thereof, beyond that time, shall be made, until the order and specifications for shipment shall be given by the purchaser.

If an agreement, as stated, can be lived up to, the results will be of inestimable profit and benefit to millers, and a thousand and one disputes, often resulting in litigation and misunderstandings which cost millers valuable trade, may be obviated. Many flour buyers are inclined to take advantage of sales placed without specifying time of shipment, and it is, of course, unnecessary to recite to you the advantages of a reform in this method of transacting business.

THE MECHANICS OF THE INJECTOR.

By J. BURKITT WEBB.

THE fact that the injector wastes no heat except a small amount by radiation, is usually accepted as proving that the instrument has a very high efficiency; when, however, we make a careful comparison of it with a good steam pump we may be surprised to have the latter come out the best. I desire to call your attention to a mechanical principle upon which the injector works, and to show that it is an unfavorable one and one which accounts largely for the difference in favor of the steam pump.

If a mass of clay or putty be projected against an equal mass at rest it will set it in motion and the two united masses will move on with half the velocity given to the first mass; if, however, the projected mass contains but one-tenth, instead of one-half of the whole amount, the final velocity will be but a tenth of that of projection.

The principle governing such cases is called in mechanics the "conservation of the motion of the centre of gravity," which means that the velocity of the centre of gravity of the united masses is the same as the velocity of their centre of gravity before they united.

In the first instance, the two masses being equal, their centre of gravity lies always midway between them, and therefore moves along with half the velocity of the projected mass; after impact the centre of gravity is in the centre of the united mass, and, as the impact does not alter its velocity, we know at once what velocity the united mass must have. In the second case one-tenth of the mass being in the striking and nine-tenths in the struck mass, the centre of gravity will lie nearest the latter and at a distance from it equal to one-tenth of the distance separating the two masses. The velocity of the centre of gravity will therefore be one-tenth of the velocity of projection and, consequently, the masses after uniting will have a velocity of one-tenth of that of projection.

In both these cases, supposing the first mass to be m_1 and the second to be m_2 ; representing the velocity of the first mass by v , and that of the centre of gravity by V , we find that before

impact the energy is $\frac{1}{2} m_1 v^2$, while after impact it is only $\frac{1}{2} (m_1 + m_2) V^2$. In the first case $m_1 = m_2$ and $V = \frac{1}{2} v$, so that half of the energy disappears at impact, being converted into heat by the blow and lost. In the second case, $m_1 + m_2 =$ ten times m_1 and V is only one-tenth of v , consequently the energy after impact is but one-tenth of what it was before, or nine-tenths is lost by the blow.

Looking more closely into the condition before impact, we see that the energy consists then of two parts, viz.: the energy of the whole system of two masses moving with the velocity V and the energy with which the two masses approach each other, that is to say, we may calculate the energy on the principle that the pair of masses is moving forward with the velocity V of their centre of gravity, and then that mass one has an additional forward velocity $= V$ in the first case, and $9V$ in the second, while mass two has an additional backward velocity $= V$ in both cases, thus causing the latter mass to stand still and make the velocity of the first mass $= v$.

Having made this division of the energy we find, as might be expected, that only the first part of the energy is preserved while the energy of approach is lost by the blow; and this holds for all bodies which are not sufficiently elastic to separate again after the blow is struck.

Now, in the injector, the water is almost at rest when it is struck by steam moving with a high velocity and thus set in motion. If the steam is, say, one-fifteenth of the water, the velocity of the mixture will be but one-sixteenth of that of the steam, and fifteen-sixteenths of the mechanical energy of the moving steam will be lost by the blow. This mechanical energy has been developed by allowing the steam to flow from the boiler into the vacuum chamber and thus to get up a high velocity, but, however economical such a method of generating mechanical power from steam may be, it is neutralized by the wasteful way of using the power, for impact is, as has been shown, a wasteful method. In this respect the injector is like a slowly moving impact water-wheel, where almost all of the kinetic energy acquired by the water in running down to the wheel may be lost in heat when the water strikes and dashes into foam; and yet in such a wheel, were it desirable to warm the water, it might be claimed that no energy was lost.

In the injector a greater part of the energy even than calculated is lost by the blow, from the fact that it is not struck exactly in the direction in which the water is to move.

In reasoning upon the efficiency of the injector it is not enough to state that no heat is wasted, because there would be none wasted if the steam were condensed into a tank of water for the purpose of heating it, while if our object were to get mechanical power it would all be wasted, whereas in a proper engine we might get out of it the legitimate amount of power. The steam used by the injector is at boiler temperature, whereas, the heat when returned is at feed water temperature, and we should therefore charge against the injector the amount of power which a good engine working between these temperatures would develop, and not credit it with heating the feed water, except so far as we might not be able to do it with exhaust steam.

CORRESPONDENCE.

[The following letters are all from our own special correspondents, and reflect their views and the views of the trade in the location from which they write.]

MILWAUKEE REVIEW.

A MODERATELY large general business has been done here during the past month and the banks have enjoyed a brisk demand for money, which has enabled them to keep their discount lines as full as is considered desirable. The discount rate is 7 per cent per annum and outsiders pay 7½ and 8, but the tendency is toward lower figures.

The breadstuffs markets are steadier at present than during the earlier part of the month. Flour is quiet and steady, with a fair demand for bakers' and low grades while patents are dull. The latest quotations are: Hard No. 2 spring wheat patents in barrels \$4.65@4.90; soft wheat patents in bbls. \$4.40@4.65; export patents in sacks \$4.15@4.40; clears, hard wheat \$3.65@3.90; soft wheat \$3.40@3.65; straights, choice bakers, \$4.15@4.40; export \$3.40@3.65; low grades \$2.00@2.50; winter straights \$4.30@4.50; Rye flour, country, in sacks \$3.00@3.50; city, in bbls. \$3.75@4.00.

Millstuffs are steady on a slight recent advance and are quoted: Bran per ton on track, car lots, \$18.25@18.50; Middlings, fine \$18.25@18.50; corn meal in bulk, course, \$20.00@20.50; Ground feed, corn and oats, \$17.50@18.00.

Wheat is steady and good grades sell readily while the poor grades are slow. The following are the closing prices of grain on 'Change Saturday 17th inst. as compared with those of same day in 1890.

	Jan. 17. 1891.	Same day 1890.
No. 1 N wheat.....	92	82½
No. 2 S wheat o t.....	87½	73
No. 2 S wheat i s.....	86½	70½
No. 2 barley i s.....	68	41½
No. 1 rye i s.....	72½	45½
No. 2 corn o t.....	47½	27½
No. 2 white oats.....	44½	22½

Several of the mills are shut down and are having necessary repairs made on their machinery. Many have considerable stock on hand. The average daily production of flour for the week ending the 17th inst. was 5,400 barrels against 3,900 for the previous week and 6,525 for corresponding time 1890. During the past year reports show that the total production was less than one half the amount of the capacity of our mills; the amount produced being 1,379,039 barrels while the capacity is about 3,000,000.

An effort was made, in the Chamber of Commerce on the 17th inst., to dispose of the pit, which, in the past few years has fallen into disuse, except as a receptacle for tobacco quids, cigar stubs and as a roosting place for holding friendly chats during the intervals when business is lagging. A petition had been presented to the Board of Directors, signed by several members, asking that the pit be removed. The cause of the pit was championed by some of the older members and an eloquent and forcible speech by Jim Bass, which, for pathetic touches and appealing terms, was on a parallel with the famous poem "Woodman Spare That Tree", made such an impression on the listeners that, when a vote was taken it resulted almost unanimously in favor of allowing the pit to remain.

The suit brought before the Board of Arbitration of the Chamber of Commerce by E. P. Bacon & Co. against the E. Sanderson Milling Co. to recover the

value of a car load of wheat has been decided in favor of defendant. The wheat was sold Sept. 27. and delivered Nov. 27. The Sanderson Milling Co. claimed that 60 days was not a reasonable time, especially as the price of wheat had, in the meantime, gone down. The complainants claimed that there is no specific rule as to time of delivery and that the wheat had been delayed in transit by the railway company on account of the blockade. This decision should be a reminder to all dealers, of the necessity, in the absence of a rule governing such matters, of specifying when, or within what length of time the purchase is to be delivered.

OUR ENGLISH LETTER.

Looking Backward—Present Markets and Indications for the Future—Collapse of a Grain Elevator—Annual Meeting of London Flour Millers—Milling Affairs in Brazil, S. A.—Football Match in Mark Lane Corn Exchange on Christmas Eve—Failure of a Large Grain House—Etc., Etc.

THE year 1890, which commenced with brilliant promise, will in a few hours be reckoned with the past, and in looking back on the past twelve months, it must be admitted that the millers of Great Britain have had everything in their favor, so that they cannot be but satisfied with the result of their years' trading. To the farming community prices have been disappointing, but still the year 1890 on the whole has been moderately satisfactory. In fact by some farmers and those connected with agriculture, the year just closing is considered to be the commencement of a far more prosperous decade than that of the eighties. There certainly has been an improvement this year due to the yield of the principal corn crops, the abundance of the pulse division, and the result of the sales of bred pedigree stock, rams and young bulls; as well as the considerable outcomes of wether lambs and draft ewes which were disposed of by the large breeding flock masters at the autumn fairs. Dairying must be added to those industries that have done fairly well chiefly because pastures have been grassy and keep abundant during the greater part of the year. Although the prices of wheat and other corn crops have been low during the year, still it is gratifying to find that there is an improvement upon the values of 1889. For the 51 weeks ending the 21st December the average prices are 31s. 9d. a quarter for wheat (a quarter of wheat is 480 lbs), 28s. 8d. for barley and 18s. 8d. for oats, whereas for the same period in 1889 they were 29s. 9d., 25s. 10d., and 17s. 9d., respectively. The Director of the Statistical Department of the Board of Agriculture, (Major G. P. Craigie) in his report to the President of the Board of Trade, states that: Among the details of the corn-cropped area, attention is always primarily directed to the area under wheat, in which by far the most of the decline is apparent. A further diminution in this cereal has to be reported in 1890, the 2,449,000 acres in Great Britain under wheat in 1889 having dropped to 2,386,000 in the current year, a decrease of 2½ per cent. The decrease occurs in England only, a very slight increase being shown in Wales, and one of 4½ per cent. in Scotland, where, however, wheat growing occupies very narrow limits.

The following table gives a summary of the estimated total production of wheat, the acreage on which it was grown and the estimated average yield per acre:

WHEAT.			
	Estimated Total Produce.	Acreage.	Estimated average yield per acre.
1890.	1890.	1890.	1890.
England.....	Bushels. 69,442,417	Acres. 2,255,694	Bushels. 30.79
Wales.....	1,712,541	68,689	24.94
Scotland.....	2,199,526	61,973	35.49
Great Britain....	73,354,484	2,386,336	30.74

The imports of wheat and flour into Great Britain during November were much less than usual, and the totals for the first quarter of the cereal year have fallen considerably below those of the corresponding period of 1888 and nearly to the level of last year.

With reference to maize or Indian corn, the unusually scanty supplies from the United States have not made the quantity imported as small as it was expected on account of the Argentine Republic and Roumania having shipped largely.

During the month the first collapse in England of a brick elevator occurred. The accident was at the elevator connected with the flour mills of Messrs. Samuel Kidd & Company, Limited, of Isleworth, near London, and it occurred on the 9th of December between 7 and 8 o'clock in the morning. The elevator is built on to another large building, contains 20 silo bins about 60 feet deep, and 8 feet square. Suddenly, without any previous indication of weakness, the whole of one side of the building fell outwards, and the contents of five bins—about 1,700 quarters of wheat—which were on that side was scattered over the fallen debris. In my next letter I will try and give you the reasons of this accident and a few details of the foundation, &c., as it will be my business to be in London shortly on some milling matter, but from what I hear at this distance from the scene the architects are somewhat to blame.

The London Flour Millers' Association held their Twelfth Annual Meeting on December 3, and after electing the officers for the ensuing year, a long discussion took place on the proper weight of a sack of flour, the Chairman urging that the Americans, as a practical people had adopted 140 lbs. as being sufficiently heavy, and that the adoption of a smaller size would give the millers a larger choice of men for carmen; but on the other hand it was urged very strongly that it would enormously increase the cost of distribution.

I hear from London that the fifth ordinary general meeting of the shareholders of the Rio Janeiro Flour Mills and Granaries was held at Winchester House, Old Broad street, when Mr. Richard Foster, chairman of the Board, took the chair. The report stated the regret of the Board that the assets did not show a more favorable result, the profit and loss account displaying a debit balance of £11,806, 4s. 8d., together with £30,962 caused by loss on exchange, which had been carried to an exchange contingency account. Part of the loss was due to the depreciation of a cargo of red winter American wheat, amounting to £8,500. The chairman in moving the adoption of the report said it would have been a pleasing duty to present a better report and declare a dividend, but owing to the circumstances named in the report they had made no profit. They had, he thought, turned the corner, and their operations since the accounts were made up, showed a much more favorable result. Mr. Simon, their milling adviser, had sent out to Rio a gentleman with instructions to report on their property, and he had sent them back most encouraging anti-

cipations as to what his report would be. The difficulties inherent to the establishment of a business like theirs had now, to a large extent been overcome. Their flour was in increasing demand, and highly appreciated by those who bought it. With the view to increasing the practical efficiency of the board, they had, he hoped, secured the services of Mr. Marriage, a London miller of high standing. Mr. Weigall seconded the proposition, remarking on the great loss which they had suffered by the fall in exchange and on the value of the property as certified by all who had seen it. He agreed with the chairman in thinking they had now turned the corner, for they were making a profit as fast as they could. It was a great advantage that Mr. Marriage had consented, subject only to his having time to attend to the duties, to join their board. The report and accounts were adopted. Mr. F. Price was re-appointed auditor, and a vote of thanks to the chairman and directors terminated the meeting.

The Weekly Miller of Monday last published the following account of a football game which took place on Christmas Eve, in the London Corn Exchange:

"A football match appears to have become a sort of 'Christmas fixture' on Mark Lane Market, and on Christmas Eve, the Old Corn Exchange again witnessed a merry game. This time the football players did not wait for the closing of the doors, but some ten minutes at least before the hands of the tall clock had given the signal for the exclusion of the public a football was tossed out and sent spinning through the air, and in less than no time a throng of eager players had joined in the game, and were urging the ball about in all directions. Play was continued till the market was reopened at 3.10, but so far as we can learn there were no casualties either to limbs, panes, or clock. It should be mentioned that the anticipation of a 'game' was pretty general on market, and that some minutes before play commenced such standholders as attended this holiday market were generally busy covering up their stands, and by the time the game was in fair progress nearly everybody was in the body of the Exchange. The football players were mostly young men who presumably, had acquired the knack of impelling forward the 'leather' in more suitable places than Mark Lane Corn Exchange, but this year they pursued their pastime without any let or hindrance from the powers which, for the time, were not. But perhaps the latter expression is hardly accurate, because it appears that as soon as it became evident that the annual match was imminent, guardians were posted at the doors, which were thus closed to the public before the 'closing time,' and this is said to have led to some unseemly scuffling between the doorkeepers and frequenters of the Exchange, who could not be brought to understand why their customary right of entry should be denied them in so unexpected a manner."

I have been spending some weeks in Liverpool and for some days at the early part of the month the affairs of Messrs Joseph Boumphrey & Co., corn merchants, Brunswick Street, Liverpool, have been the topic of discussion in the corn trade. The liabilities of the firm were roughly stated to be about £50,000 and the principal creditors are the Union Bank of Liverpool.

Mr. Louis Gibson, the well known American writer on the manufacture of

flour and author of Gradual Reduction Milling, has been staying a short while here on his way to London. Mr. Gibson who intends to winter in Paris, has already visited Glasgow, Edinburgh and Dublin, and intends to approach the importers of American flour in this country with a view of their combining with the American exporters to obtain a more favorable and quicker transportation. To-day is the 22nd day that frost has been registered in England, and weather continues nearly, if not quite, as cold as ever. The thermometer registered 25 degrees here, 26 degrees at Holyhead, 20 degrees in London, Oxford and Cambridge, 12 degrees at Dungeness. The mean daily temperature has now been below the freezing point for 22 consecutive days. Taking this test for the length of frost the Greenwich observations do not show a period of cold so prolonged as the present since 1813. A very severe frost commenced on the 26th of December 1813 which lasted just 32 days. The next prolonged frost since 1813 commenced on the 9th of January 1823 and lasted 18 days. In the Crimean Winter 1854-55 the daily mean was below freezing point from February 7. to 23. or 17 days.

The British Vice-Consul at Nicolaieff reports that the late harvest has been a most disappointing one throughout the whole of South Russia.—*L. Maygrove.*
Liverpool, 31st December, 1890.

OUR BUFFALO LETTER.

Buffalo Millers and Coopers—A new establishment organized—Corn receipts—Second hand barrels—Bucket Shop trading—Buffalo Merchants' Exchange notes—Changes in Firms—No Canal Association—Receipts and stocks on hand—"Bohemian Oats"—Bridging Niagara—Railway matters—The flour market—Election on change, etc., etc.

THE Buffalo coopers got together January 2nd, and decided to advance prices $3\frac{1}{2}$ cents on each flour barrel, also to shut down until the stock on hand showed a considerable decrease. On January 6th the millers—that is the five largest, viz.: Schoellkopf & Matthews, A. R. James, Urban & Co., Harvey & Henry and Shuttleworth of the Banner Milling Company met and decided to organize a stock company for the purpose of manufacturing their own barrels. It is claimed Buffalo coopers do not buy their cooperage stock from first hands and therefore cannot compete with Detroit and other milling centers. This of course puts our millers at a disadvantage in the strife, for the eastern trade against other points, on the other hand the coopers claim that barrels are cheaper in Buffalo than other towns. Messrs. Harvey, Urban and Shuttleworth were appointed a committee to purchase a plant and stock. One thing is certain, and that is, if George Urban takes the lead in this matter, the coopers shop will go up before the next demand for flour creates the necessity for a fresh supply of barrels.

Griswold's new mill at West Alexander on the Lackawanna line started up last week.

Richard K. Noye has resigned his position as Councilor of the University of Buffalo.

S. B. Patridge of North Collins, Erie county, committed suicide by shooting, at Brown's hotel in this city, January 6th. He was well known among flour and feed dealers and had quite a large store in North Collins. The act was no doubt planned some time ago, as he held a large number of life insurance policies of late issue.

The receipts of corn by rail for the season thus far have been very large and of most excellent quality. Only two cars of the whole amount were "hot" and of No. 4 corn about a dozen were graded. The trade this year is expected to be at least 25 per cent. larger than last, which was the largest on record.

The Labor Union of this city is again after the millers who are using second-hand barrels. The newly elected common council was organized on the 5th of January, and the corporation counsel is also of a more liberal stripe than the former incumbent. The latter declared the demands of the coopers unconstitutional. The boys therefore have hopes of bringing forward sufficient "influence" to pass the ordinance on the plea that such second use of barrels is dangerous to health. If it is true that flour is one of the best absorbents, the claim of the work-

ingmen that it is dangerous to health must also be fact. Diseases have been spread in a much more unlikely manner as the records of boards of health can easily show. The millers' argument is that the barrels used have in no way been rendered unfit for use. How does the miller know? The barrels are collected by men not connected with the mill which purchases them. Everything goes to the barrel man, when he can get a few cents off. Millers, you will have to fight this with better argument than you used on the last occasion.

Have you ever noticed a business man enter an "option trading shop?" If so, you will notice that he does it by the side door—they all have these little conveniences, no matter what their pretensions to honest dealing may be. Some "shops" are fitted up with green curtains to hide the foolish virgins whose lamps are filled. When the business man is caught in one of these places, he acts like a boy denying a raid on the cherry tree while his mouth is stained with the fruit. He makes a good attempt to swagger out, but lord, you can see his conscience pricking him at every step. One or two visits are not commented on, it is only after he commences to spend a few hours with the idle crowd, he meets there swapping foul stories, that his banker hears of his new departure. Then, later on his business associates whisper it to each other and some reluctance is shown to trade with him. Finally a good natured friend bluntly tells him he is a "damned fool", and if he is not too deep in the quicksand he takes the warning. I only speak of this now because several of our business men are in the path trod by those who have lost all, on these treacherous waysides.

Messrs. Mather & Brown of Honeoye Falls, have put in roller machinery and are fairly swamped with orders.

The Buffalo Merchants' Exchange wants the Chicago quotations, and wants them bad. How to get them is the question. A proposition was made to subscribe a sufficient sum among the grain trade to obtain the desired information, but it met with little favor. The quotations are now posted about half an hour late and do not agree with those received elsewhere. Still there is no knowing whether these latter prices are any nearer correct, as several discrepancies between them and the official Chicago figures have been noticed many times.

The Matthews-Wright case was put over for the next term of court which convenes about the first of February. It begins to look as if this celebrated case will not come off at all now that young Wright has managed to get himself into another questionable business tangle through the failure of Bateman & Co. The disclosures of assignee Garver caused a smile on change, especially the statement that "neither Mr. Wright nor Mr. Gladwin ever contributed one dollar toward the capital of A. J. Wright & Co., but the whole capital was contributed by Mr. Coon, the special partner." Trouble has come thick and fast upon young Wright. First the failure of A. P. Wright & Son, the Matthews-Wright suit next, followed by the "Grain Merchant" letter, the writing of which private opinion places at his door, and now the serious charges made by Bateman & Co.'s assignee. It is sad to add that there is little or no sympathy expressed for the Wrights. Mr. Wright to-day asked his customers to close their deals.

Changes in firms commenced on the 1st of January, and quite a number are looked for between this and the opening of navigation. The most important is the resignation of S. W. Yantis, agent for H. J. Coon & Co. Mr. Yantis came here a young man to succeed his brother J. A. Yantis who went to Boston to represent Coon & Co. They were probably the first firm to establish at Buffalo a grain agency of an independent order, and their success was beyond expectations. Mr. Yantis was respected by all his associates and to show their appreciation the grain trade presented him with a handsome desk and chair.

Mr. Wm. J. Reardon for the past two years connected with Messrs. Spann & Chandler, also struck out for himself on the 1st of January, taking a room among the hard wheat men on the 2nd floor. Mr. Reardon is an energetic, wideawake, hustling young business man who has had fully ten years of experience in the grain trade and made many friends. He will succeed.

Mr. W. V. Downer, for a number of years chief clerk for S. A. Yantis has been appointed by H. J. Coon & Co. as agent here. Mr. Downer possesses the confidence and esteem of the members of the Merchants' Exchange.

C. A. Warfield who represents Bartlett, Frazer & Co., of Chicago, finding his quarters too small for his constantly increasing business, has taken the connecting room occupied by Messrs. Ratcliffe & Son and fitted it up in fine taste as a private office. Mr. Warfield has become quite a power on

change and the canal men dread the coming of their season's business with this notorious disturber of the peace in the field again. C—Almighty Warfield is the new name by which he will be known—so Jacus is reported saying.

There will be no canal association next season. That's settled. All the better for grain men and some of the forwarders, but between the two the poor boatmen will suffer. Sid Finn is happy as a lark and working like a beaver to secure the lion's share of the grain. The only salvation now for the canal men is to own an elevator and I believe before the year is out a start will be made in that direction. It must be done either by the state or private capital if the usefulness of the canals is to be maintained. An elevator answering this purpose could be built before navigation opens this spring, and the cost would not exceed \$50,000.

The Lehigh Valley railroad will put a line of steam canal boats on the canal next season between Buffalo and New York to carry grain. This will have no effect on rates.

Next year promises to be an eventful one in more ways than one, that is, if the present indications are fruitful. Rumor has it, and there is a glimmer of truth in it, that there will be no elevating association next year. Floaters are in course of construction and with the dissatisfied ones forced into the combination last year, they are a standing menace to the association. Besides there are internal wars of which I cannot speak at present, likely to knock the old combine into a cocked hat. Oh, what fun we're going to have. The new Thompson mill is buying considerable winter wheat from local farmers and quite a lot of hard is booked for it from Buffalo.

The first consignment of Minneapolis wheat reached us about December 25. It graded No. 1 Northern and is of excellent quality. About 20 cars have been received thus far but more is expected. The freight rate was 15c per bushel. The supply of Duluth wheat in store here is decreasing fast and the deficiency must be made up from Minneapolis no matter what the cost may be. New York took 120,000 bus. No. 1 Northern during the month, and for a week was figuring on a round lot of No. 1 hard but would not come up to the figures asked. No. 1 hard advanced from 8 to 11 cents over Chicago May and No. 1 Northern from 3 to 7 over the same month, during the week ending January 10th.

The stock of No. 1 hard is only 254,000 and of Northern 819,000 against over 2 millions last year.

It is claimed by those who should know that a larger amount of flour will be shipped here this winter from the Northwest than ever before.

Millfeed is higher again, having advanced \$1.00 per ton for the month and is scarce at \$21.50 for winter and \$21.50 for fine bran. Fine white feed is sailing up to about \$25 or \$26 per ton. Still higher prices are predicted next month.

I understand that quite a number of Buffalo grain men are speculating in hay, Heindol & Rodebaugh being among the largest. Hay has never been so cheap as it is at present throughout this county. Fine timothy sold as low as \$6 per ton loose and \$8 baled. There is money in this certainly.

Work on the addition to the R. Ovens bakery is well advanced and when the building is completed it will be the largest individual plant in the country. The new structure is 85x150 feet, 4 stories high and nearly fire-proof. Five hundred men will be employed.

Indictments were recently found in Niagara county against several "Bohemian-Oat" dealers. Farmers who have been swindled, club together for the purpose of making a test case. The game is such an old one that it is difficult to see how even an old mossbacked granger who never reads a paper could be persuaded to bite.

A scheme to bridge the Niagara river at Buffalo is on foot and what a blessing it would be if sufficient capital could be secured to carry it out. A mean little boat, managed of course by Canadians, has a monopoly of the river and a few days ago this tub went ashore in a fog. Think of it, actually went ashore. This boat makes half hour trips to Canada and one would imagine the skipper could pilot her across blindfolded after 10 years of service at the wheel. The bridge company has petitioned for a franchise in the Canadian Parliament for a foot, carriage and railway bridge and to empower the said company to be incorporated in the state of New York for a like purpose.

The people of Buffalo have for years suffered the evils of the present system of grade crossings by railways entering the city, and a committee, of which Mr. George Sandrock is one, has for two years past been trying to come to some agreement with the roads to abolish them but without success. The Rome, Watertown and Ogdensburg road is the latest to ask for admission to enter the city at grade, and after a bitter fight permission was granted by the common council to lay such

tracks within 15 feet of the Lehigh Valley road. Mr. Bissell, Ex-President Cleveland's old law partner, appeared for the R. W. & O. and General Doyle, president of the Merchants Exchange and general agent for the Lehigh Valley Company aided materially in bringing about the favorable result. Mr. Bissell's speech before the commission is worthy of repetition. He said:

"When you are talking up Buffalo, what do you say? You speak with pride of your railroad facilities. You have more miles of trackage than any other city in the world. Is anybody in Buffalo particularly guilty of the prosperity of Buffalo since 1880? No, sir. We have prospered through the injection of \$20,000,000 of foreign capital in the last ten years. Here comes the opportunity of connecting with the farming country on the south shore of Lake Ontario, a connection with farming territory which we need. Now here comes another railroad that wants to come in. This track is for the benefit of freight traffic. You can't stick it in the air. It must be on the ground. They say it's dangerous. We admit it. It's dangerous to run machines. Will you therefore shut up machine shops? It's dangerous to sail the lakes. Will you stop shipping? A man was choked to death the other day with a fish bone. Will you stop the eating of fish?"

The argument of Mr. Bissell or something else, was convincing—something else probably, as it takes much to convince a Buffalo alderman, as a rule.

The old Tift elevator owned by the New York Central roads was cleaned of its grain in store a week ago and will be torn down as soon as possible.

Natural Gas is now being piped from Canada to Buffalo the company having after many unsuccessful attempts with a large pipe managed to lay a four inch one across the river. Uncle Sam will collect 10 per cent ad valorem.

Chaffee's mill at Springville was entered by burglars a week ago and about \$30 in cash secured by the gang. A freight car stood in front of the office window which gave the boys full swing.

The Godfrey Pond mill at Batavia, owned by C. J. Bork, proprietor of the Attica mills was started up a few weeks ago after being idle for nearly two years. The young Bork is finding money in the milling business and as he has unlimited backing from his sire who knows a good thing when he sees it the chances are, he will gobble up all the "dead" mills in this section of the state ere long. More power to the energetic young man.

Flour has been dull—that is a mild term for the condition of the market during the past month. A number of mills were shut down for necessary repairs for a few days but the majority were supplied with orders ahead to make running compulsory. A few mills have heavy stocks on hand, but this appears to be the rule with them and has been the case many a time on a more uncertain wheat market than the present. The demand will come as it usually does all in a heap, taking the stock on hand and that unproduced for months thereafter. This ever occurring whine of some millers is enough to put wheat out of condition. As to prices, well if the quoted list is \$5.75 for best patent springs there are millers who would like to see some one ready to bid from 40 to 50 cents less for round lots. Winters are not worth quoting except in a local way \$4.85 to \$5.00.

Mr. Alexander Mann, formerly of Buffalo but now of Boston, Mass. was on 'change two weeks ago looking as chipper as ever. I am credibly informed that his first inquiry was for Mr. Newman and strange to say the latter gentleman had been looking for Mr. Mann all the morning, knowing that the Hub man was in town. They embraced and so loving were the pair that Mr. Mann missed an appointment to dine with several bankers and a grain merchant or two at the Iroquois.

The Merchants Exchange has been in a turmoil of excitement since the 9th inst. when the following tickets were nominated:

Choice for President—S. S. Guthrie.
Choice for Vice-President—George Clinton.
Choice for Treasurer—Frederick L. Danforth.
Thomas Hodgson, Philip Houck, Melvin Dunning, Arthur D. Bissell, S. M. Clement, Jr., William Hengerer, Walter J. Shephard, Geo. H. Wolcott, Harvey J. Hurd, J. H. Rodebaugh.
Choice for President—John N. Scatcherd.
Choice for Vice-President—George Sandrock.

Choice for Treasurer—John L. Williams.
Rensselaer W. Daniels, Charles B. Armstrong, Harlow C. Palmer, Howard H. Baker, Pierre A. Rosseel, H. F. Shuttleworth, William G. Heathfield, H. D. Folinsbee, Edward L. Anthony, Robert R. Hefford.

The first ticket was dubbed the "prayer ticket" and the second the "wine ticket." If Mr. Guthrie was elected, the members of the board would be invited out to prayer and if Mr. Scatcherd was elected the boys would

adjourn to the Anderson for wine galore. Still the latter inducement, no matter how tempting it appeared to a majority of the members, failed to bring out the enthusiasm expected by so popular a name at its head. The reasons were that the ticket was made up principally of gentlemen who favored high dues, too much freight bureau and generally expensive ideas concerning the running of the different departments, especially the secretary's room. Besides this it had "Clint" Newman backing it with tongue and dollars. This in itself was sufficient to cause its defeat. Every man on the Guthrie ticket was a strong card except the head, and really nothing could be said against that gentleman's character, business ability, or anything else. Mr. Guthrie was never anxious for office in the gift of the Exchange, but is proud of being the leading spirit in the *Boot Blacks' and News Boys' Home*. This is as matters stood on the day before election.

OUR BALTIMORE LETTER.

Ortolo's December Remarks cause much comment.—The Coat fits in Some Cases.—A Moral Lecture with a Promise.—The Baltimore Flour Market.—The Wheat Market.—Predictions for the Future—Local and Personal Notes.

OUR remarks in these columns last month caused quite a breeze in the trade here, where they were generally read, discussed and commented on. As was our aim and intention they hit the bulls-eye exactly, and from all accounts brought many pretenders to grass.

It was really amusing to hear of the quietly thanking God that they were not as other men and to witness the innocent washing their skirts of suspicion; and indeed there seems to have been some squirming where least expected and by men who have always borne exceptional characters.

If, however, our random shot has had the effect of bringing down unsuspected game we are glad of it and glory in the achievement.

We wish it understood, though, and as we stated at the time, that our accusations emanated from a broad, cosmopolitan standpoint and had no especial significance or reference to any market in particular but to all alike in general.

And just here permit us to say that it is quite unnecessary and unbecoming for reputable dealers to take exceptions to what was said and to go round proclaiming their innocence, when there was no charge whatever laid at their doors.

The innocent need no vindication and should not be so quick to wear the shoes intended for others, unless perchance they happen to fit them. Our shafts are aimed at the Devils masquerading as saints and if that is your size, reader, we are then after you, too, regardless of who you are, your protests or your profession.

"Silence is golden" but "murder will out," and on that principle a declaration of innocence is oftentimes a confession of guilt. "A word to the wise is sufficient"—if you are innocent, keep quiet and let the guilty do the talking.

What we are contending for is more purity among merchants and less perfidy.

Half the world, apparently, is forever trying to get the better of the other half and in the attempt all rules of propriety, honesty and integrity are too often either forgotten or ignored and the consequence is that many men do things under the impulse of the moment and when struggling for the ascendancy which they are sorry for afterwards, and which they would scorn to do on sober reflection. The whole trouble is that we are moving at too rapid a gait. Competition is also too great. All is hustle, excitement and confusion. Men don't take time enough to think—their brains are fired with the one ambition to get rich and instead of proceeding cautiously they persist in driving on at a break-neck pace until finally from sheer exhaustion they drop into their graves and are remembered no more forever. These are they too who are even too busy to die decently and in order, but must needs be cut off without warning and preparation.

No recreation or repose in the battle of life for them, but with aching, throbbing, seething and bewildered brains they rush on, pell-mell, helter-skelter, hither and thither after the Almighty Dollar until the end comes when they "shuffle off this mortal coil" and leave their hard-earned savings to the prodigality of some worthless heir.

How often have we seen this exemplified in our own immediate circles and how strange it is that men will never profit by such examples, rein in their speed a little and occasionally take life in a walk rather than in a perpetual gallop.

We don't believe in going through life out of breath, particularly, when there is no necessity for it.

This brings us to the point we wish to make, namely, that the present go-as-you-please-lightning-express way of doing things is alone responsible for the charlatans, adventurers, rascals and thieves that infest the trade. Competition is so great and profits so small that a premium is offered for dishonesty and the consequence is that the temptation is greater than many can withstand—hence the large and ever increasing percentage of rogues in the land.

While overproduction continues, so also will cut-throat competition abound, and while such conditions exist, sharks, swindlers, tricksters, scoundrels, hypocrites, and the like, will increase and multiply, hold high carnival and never be content until they have sucked the very life-blood out of trade. Our fathers, however, did business on different principles, and consequently lived better, longer and happier lives, and, in the end, died richer too than the average man of the present.

They left their cares and worries behind them when they came home at night, in those days, and instead of going out after supper to the club or theater the evening was spent with wife and children and everything done to amuse the little ones and otherwise brighten up the fireside.

Our sires did not leave their religion at church on Sunday's, either, but carried it around with them during the week also and lived up to it.

They were not ashamed to face the devil and call him by his proper name. In a word, they thought that "a good name was rather to be chosen than great riches" and so shaped their destinies accordingly.

What a change has taken place since then! Now, great riches are rather to be chosen than a good name, and indeed the whole world seems to be rolling rough-shod to hell.

Is there time to call a halt, right-about face and pursue the way our fathers trod? If so, for God's sake let us do it before it is too late!

"It is never too late to mend," but if some of the rascals we know of don't hurry up and change their tactics we will advance a step further and give them a broadside at close range.

Life is too short to make enemies at every cross-roads, but it is necessary it seems in this case and where we have so many culprits to deal with.

Such enemies, however, we are proud of, and shall continue to denounce their methods and scorn their patronage, regardless of consequences.

If men would enjoy the bright side of life they would pay more attention to character, conscience, domesticity and health which money cannot buy, rather than ignore the one and neglect the other the balance of their days in the effort to amass a fortune.

Anticipated joys based on infidelity seldom materialize.

The present is fraught with much for the upright, and the same identically which brought happiness in the past to our fathers, so why not like them lead exemplary lives and reach out and pluck the blessings at our door? "A bird in the hand is worth two in the bush."

* * * *

The past month in the Baltimore flour market has been devoid of interest, owing to the holidays and the course of wheat values.

There have been occasional spurts of activity which resulted in some large sales to arrive, but at this writing no life is apparent in any quarter.

Prices are about the same as those of a month ago, but we fail to note any pressure on the part of mills to force sales as was the case at that time. The stock of flour here Jan. 1st, exclusive of that held by city mills, was 74,006 barrels against 73,477 barrels same date last month, and 78,767 barrels Jan. 1st, 1890.

Jobbers nor city mills have made any change during the month and altogether there is little to report. The flour sold to arrive was principally spring wheat patents ranging from \$5.00@5.20; baker's from \$4.10@4.25; winter patents from \$4.90@5.15; straights from \$4.60@4.80, and clears from \$4.35@4.55.

Dealers as a rule are pretty well stocked again, and there is no prospect of further activity unless wheat should happen to materially improve, in which event the trade would probably buy moderately in anticipation of wants.

City mills, however, have been quite busy throughout the month and during that period have sold fabulous lines of extra for South American account.

Nothing of moment has been done in low grades for the West Indies, but there is an inquiry in the market for a cargo of super at present, which may result in business hereafter. Output of city mills for December was 43,000 barrels.

Clearances of flour from this port the past

month have been enormous and are likely to so continue for sometime to come.

We hear also of large quantities in transit for Newport News which will be forwarded by the Furness Line on arrival.

Our exports are going in the shape of flour this year which speaks well for the mills.

Let them keep it up as that is the only way to feed foreigners with profit to ourselves.

While many here look for no material change in flour, there are others who predict a sharp advance in it shortly.

We quote the range of the flour market as follows:

Spring wheat, patent.....	\$5.00@5.25
Spring wheat, straight.....	4.50@ 4.75
Spring wheat, bakers'.....	4.00@ 4.25
Winter wheat, patent.....	4.90@ 5.15
Winter wheat, straight.....	4.60@ 4.80
Winter wheat, clear.....	4.35@ 4.60
Winter wheat, extra.....	3.50@ 4.25
Winter wheat, super.....	3.00@ 3.40
Rio brands, extra.....	5.00@ 5.10
City mills, super.....	3.15@ —
Rye flour.....	3.75@ 4.25

The wheat market here the past month has ruled pretty much the same as flour—fluctuations have been narrow and business restricted, particularly, as far as speculation was concerned. Cash wheat is 1c. higher than the figures of a month ago, while the futures remain practically unchanged.

Stocks, in the absence of receipts, and with good clearances, show a further shrinkage.

Milling wheat is still scarce and in demand at full prices.

Cables are higher and a good export inquiry prevails, but in the absence of available tonnage, transactions in the main have been confined to berth-room parcels although we know of two full cargoes that have been taken since our last review based on current rates of freight. Business in this direction is hampered only by scarcity of tonnage.

New York has taken quite a jag of our No. 2 red for milling and mixing purposes of late.

Speculation here still clings to the bull side of wheat.

In view of the present statistical position of the cereal it sees no other alternative but for values to advance and that right sharply.

Manipulators may hold it down temporarily, pending the continued movement in the Northwest, but prices will go higher ultimately all the same.

That last Government report was one of double barreled action, bullish on the old crop and bearish on the new, but when the "boys" get through selling and depressing values on that they will be looking around in vain for something to fill their contracts with.

Next year's crop won't fill May contracts by a large majority.

Gaze on January, February and March wheat in New York and tell us who are paying the carrying charges, the bulls or the bears?

Just so will it be with May, June and July when they come 'round. A man is a fool to sell a short-crop option at a discount.

The visible supply is likely to show a weekly decrease from this time out. The amount afloat will also probably grow less and less from time to time, and indeed the whole situation warrants higher prices.

Silver is being used as a cats-paw to influence prices, but all such side issues will have to give way sooner or later to the upward march of values.

Those who are bearing wheat now with great gusto will be bulling it at \$1.25 on the seaboard before another crop, unless all signs fail.

We have lost nothing the past month and are likely to show a considerable gain a month hence.

Stock of wheat in Baltimore is 614,047 Bus.

CLOSING AND COMPARATIVE PRICES.		
Wheat No. 2 red	Closing to-day	Same time last year.
Spot	97½@97½	80½@80½
Steamer 2.....	93½@—	—@—
Fultz.....	95 @103	72 @82
Longberry.....	100 @103	73 @83
January	97½@—	80½@80½
May.....	103@103½	85½@85½

Corn has fluctuated violently here during the month, but closes to-day only ½ct. over our last quotations.

Receipts and shipments have been good while stocks show a decrease. The western movement has not commenced in earnest as yet, but is likely to at an early date. Home consumption and our coastwise trade about absorb all the near-by offerings.

Speculation here sticks to the bear side on corn and predicts a perpendicular drop in it some day. The Government report didn't show up so badly on the cereal after all, and it is to be hoped that the farmers will improve their chance and sell their holdings before the break finally comes.

Stock of corn in Baltimore is 164,594 bus.

CLOSING AND COMPARATIVE PRICES:

Corn Mixed.	Closing to-day.	Same time last year.
Spot mixed.....	59 @59½	37½@37½
Stmr mixed.....	57 @—	34½@34½
South white.....	60 @61	38 @41
" yellow.....	61 @62	38 @41
January.....	58½@—	37½@37½
May.....	58 @58½	38½@39

ITEMS OF INTEREST TO THE TRADE.

Secretary Wheatley of the *Corn and Flour Exchange* makes the following summary of the business of the year 1890 at Baltimore in his *Daily Produce Report* of recent date:

Receipts of flour amounted to 3,369,831 brls., against \$3,189,572 brls. in 1889. Export 2,753,628 brls., against 2,332,865 brls. in 1889. Receipts of wheat in 1890 were 6,378,638 bus. against 6,889,432 bus. 1889, and exports were 4,785,142 bus. in 1890, against 4,507,165 in 1889. Receipts of corn in 1890 were 21,093,894 bus. against 18,354,018 bus. in 1889. Exports 18,961,871 bus. in 1890, against 16,617,177 bus. in 1889.

Receipts of oats for the year 1890 were 2,556,630 bus., against 1,909,916 in 1889. Exports in 1890, 547,039 bus. against 131,999 in 1889.

Receipts of rye amounted to 469,880 bus. in 1890, against 260,300 in 1889. Exports of rye in 1890, 28,859 bus.; 1889 nil.

Receipts of barley and malt for the year 1890 were 772,177 bus., against 628,395 bus. in 1889.

Charles A. Pillsbury, of Minneapolis, was here last week on his way south for his health, and predicted \$6.00 for spring wheat patents on the seaboard in February.

Jas. H. Knowles, representing Kehlor Bros. of St. Louis, and the La Grange Mill, of Red Wing, Minn., was also here last week in search of trade.

P. P. Simmons, Freeman's agent, bobbed up serenely here today and will go to Washington and from there to Harrisburg, Pa. before returning to headquarters.

W. J. Smith, of the Geo. P. Plant Milling Co., of St. Louis, stopped off here to pay his local agent a short visit late in December.

The C. A. Gambrill Mfg. Co. has gotten out a handsome engraved pamphlet illustrative of the art of milling.

Blanchard Randall, the present incumbent, has been nominated as president of the Baltimore Corn and Flour Exchange for the ensuing year.

The Washburn-Crosby Co's agent, of Minneapolis, is in town hunting for orders.

H. A. Deardorf, of the Isaac Harter Co., of Ohio, was seen on the floor of 'change last week.

The feed dealers of this city gave us a representation of an Indian war dance on 'change the last day of the old year.

We find that the UNITED STATES MILLER is pretty generally read by the trade of Baltimore.

ORIOLE.

Baltimore., Jan. 14th, 1891.

OUR ST. LOUIS LETTER.

Annual production of St. Louis flour mills—Comparisons—Merchants Exchange election—Camp Spring mill fire—Criticism of state inspectors—Transportation matters—Wheat market—Flour production and market.

ANNUAL reports, annual elections and annual good resolutions are the topics for this month's contribution. The winding-up of the year's business was the chief occupation of the St. Louis flour men, and their results were hardly as gratifying as last year's totals, a falling off of 194,437 bbls. from last year's work, of 144,614 bbls. from 1888, and of 113,712 bbls. from 1887. Of course it must be taken into consideration that all the mills were not running regularly. The St. George was shut down for six months, hence its poor showing of 15,300 bbls., while the Anchor mill's output of 58,000 bbls. is owing to its loss by fire on March 15, 1890. The output by mills was:

	1889.	1890.
Plant.....	344,521	301,082
Kehlor.....	288,800	289,560
Eagle Steam.....	207,664	230,150
Camp Spring.....	210,258	203,640
Regina.....	161,340	155,760
Victoria.....	125,782	143,467
Saxony.....	103,777	108,966
Jefferson.....	92,565	100,233
Hezel.....	104,000	93,152
United States.....	85,735	86,269
Meramec.....	60,236	61,782
Anchor.....	225,859	58,000
Carondelet.....	30,905	24,635
St. George.....	25,000	15,300
Total.....	2,066,442	1,872,005

As the daily capacity of our mills amounts to 10,000 bbls. or to 3,120,000 bbls. for the year of 312 days, the output for 1890 is not nearly as good as it might have been.

The annual election of officers for the Merchant's Exchange for the year 1891 took place Jan. 7th. With only the regular ticket up, matters went off smoothly.

Marcus Bernheimer received all but four of the 1070 votes cast for the presidency.

The struggle between Geo. H. Plant and Sid. R. Francis for first vice-presidency enlivened matters a little. Mr. Plant, however, managed to beat his opponent by a small margin, receiving 765 votes to his opponents 610.

The treasurer's statement for the year shows that the total receipts from all sources amounted to \$68,993.47 and that the total expenses were \$60,641.84, giving a surplus of \$8,351.63, of which sum \$5000.00 goes to the reserve fund, leaving a balance of \$3351.63.

Speaking of the reserve fund, which now amounts to \$508,723.60, Pres. John W. Kauffman, of the Board of Directors, strongly advises the Exchange to expend it in the erection of a new Merchant's Exchange Building. As the lease on the present building expires in 1895, the Board believes that now is the time for action on the matter if there is any intention of putting up a building of their own.

At the opening of the year there were 3190 members, but this number has been reduced by the redemption of the certificates of twelve members deceased and by the forfeiture of 62 leaving as a total of membership at the close of the year of 3116.

The new year started out with a mill fire—Camp Spring mill being the unfortunate victim. The fire was fortunately small and resulted in a loss of about \$5000 on flour and grain in stock. The buildings were only slightly damaged.

On Dec. 31, 1890, the Missouri warehouse and railroad commissioners held a meeting in this city and made an examination of the St. Louis elevators. Their chief object, however, was the election of a successor to Mr. Jasper Burks, chief grain inspector for Missouri. There were several applicants for this position, prominent among them being Capt. Wm. M. Price, of St. Louis, who had a very strong endorsement. But endorsements counted very little in the selection as Assistant Chief Inspector O'Shea was promoted to the chief inspector's place and his old position filled by the election of Frank Washington. This latter gentleman had for the past year been drawing a salary of \$1800.00 as chief supervisor. With his promotion, however, the old office was abolished. As a recognition of the Farmers' Alliance, Mr. J. Marck Anthony of Madison county, who is vice-president of the Farmers' Alliance, was elected to fill the newly created office of treasurer. Editor Gallagher, of the *Kansas City Times*, was appointed chief inspector for Kansas City. Mr. W. H. Hall, another Farmers' Alliance man, was proffered a \$1500 clerkship, but he has since respectfully declined. Of O'Shea's appointment as chief of the grain inspectors for Missouri, farmers all over the state are making vigorous protests and are doing their utmost to have him removed. As a change will soon occur in the commission it will not be surprising to see an entire reorganization of the department of grain inspectors.

There is no doubt that such a reorganization is needed. As it is, the inspectors give little satisfaction to the merchants. As an example of their work, it might be well to give a peculiar ruling of their's this week. As is well known, Kansas hard wheat monopolizes the St. Louis market in its line and for the most part comes through Kansas City shippers. A short time ago twenty cars of wheat were shipped from Kansas city to East St. Louis by way of the C. & A. R. R. On inspection the Merchants Exchange inspectors graded it as No. 2 hard. A few days later the wheat crossed the river to this city, and the Burks-O'Shea inspectors attempted to pass fair judgment on it. As usual they found that the East side inspection was decidedly "off" and that the wheat should have been rated as No. 2 red, and accordingly changed the inspection to No. 2 red. As there was a slight difference of 10c. between the two grades, the St. Louis millers were not altogether pleased and were not slow in airing their opinions on the chief inspector and his assistants. In view of the fact that the East side inspectors are experts and have long carried on all the inspection for the Exchange, the millers are more inclined to rely on their judgment rather than on that of the Burks-O'Shea crowd.

The Board of Directors have chosen the inspectors for the Exchange for 1891. The number was reduced from five to three this year and J. L. Currie, W. E. Robinson and C. O. Dutcher were chosen. The flour inspectors for 1891 are Richard Perry, Victor Goetz, Fred Bohle, J. Hamsworth and Aug. Rump.

And Kansas is again heard from under date of Jan. 10, 1891. The flour men are preparing a long address to the Interstate Commerce Commission, asking for lower rates on flour to the sea coast. The petition hails from Central Kansas and is to be endorsed by all the flour dealers. The demand is the result of the unequal rates on wheat and flour, which afford the Eastern producer a big advantage over his Western competitor in the export trade.

A special rate to the Gulf is particularly asked for, as low rates from thence to Liverpool can easily be secured. It is claimed that over one hundred cars of flour for export are at present waiting for the asked reduction, as the present rate does not afford a sufficient profit for the cost of production.

WHEAT.

Receipts for the week amounted to 71,940 bus. as against 66,393 bus. last week. Total receipts for the past year were 11,135,496 bus. Shipments for the week were 50,390 bus.; last week 58,358; for the year, 3,720,701 bus. Stocks in elevators for past week, 1,844,267; withdrawals in past week for city consumption, 59,545 bus.; for rail shipment, 78,295 bus. The market was very light and there was only a slight demand for No. 2 red from country points—the city mills being well supplied. Quotations for the week are:

	No. 2 Red.	No. 3 Red.
Monday	94½	91
Tuesday	94½@94½	92
Wednesday	94½@94½	92
Thursday	94½@94	91
Friday	93½@93½	90½@92
Saturday	92½@93	91½

FLOUR.

The flour market is very quiet and there is very little trading—trade being local and Southern entirely—no export business whatever. Prices very firm; output, light both for city and country. Receipts, 20,253 bbls. as against 16,700 bbls. last week; shipment, 46,489 bbls. this week; last week 54,206 bbls. The output of the mills was 47,450 bbls., divided up as follows:

NAME.	Output for the week. Barrels.	Output for the past four wks. Barrels.
Alton City.....	3,800	3,800—one week.
Crown	2,400	7,200—three weeks
Jefferson	3,000	7,100
Plant	6,000	18,500
Regina	3,600	13,200
United States....	1,000
Victoria.....
St. George.....
Planet.....
Kehlor.....	7,500	21,100
Eagle Steam....	5,000	18,500
Camp Spring....	3,000	10,700
Carondelet	750	2,000
Hezel	2,700	8,800
Meramec	1,500	5,100
President.....	2,400	10,400
Saxony	2,600	7,800
Yaeger	3,200	11,550
Total	47,450	147,030

Present quotations on flour are XXX, \$2 90 @ 3 00; family, \$3.10 @ 3.25; choice, \$3.35 @ 3.65; fancy, \$4.00 @ 4.10; extra fancy, \$4.20 @ 4.40; patents, \$4.60 @ 4.75.

WALTER HOWARD BAIN.

St. Louis, Jan. 17, 1891.

NEWS.—The Manitoba wheat crop which was expected to exceed 20,000,000 bushels, is estimated by the Winnipeg Department of Agriculture at 14,665,000 bushels, against 7,201,000 bushels last year; the great bulk of the crop, however, has been more or less injured in quality by the frost.

THE Relyea Grist Mill at Rondout, N. Y., burned Jan. 9.

KEISTER & LOUCKE succeed the Scottdale Milling Co. at Scottsdale, Pa.

W. H. HAND & Co., of Adrian, Mich., are succeeded by the Hand Milling Co.

THE Minneapolis (Kan.) Steam-Milling Co. are building a 50-barrel roller mill.

NEAR Paris Ill., Jan. 5, the Vermillion Company's flouring mill burned. Loss \$4,000.

AT Riverton, Neb., the Eagle Co.'s mill was recently burned. Loss \$5,000; insurance, \$2,500.

THE Fort Orange Milling Co. has been incorporated at Albany, N. Y. Capital stock, \$100,000.

JOHN CRETORS & SON, owners of the Model Mill at Leavenworth, Kan., have made an assignment.

THE Kansas State Millers' Association will hold their annual meeting January 23, at McPherson.

A STOCK company has been organized at Clinton, Mo. with a capital of \$40,000 to build a flour mill.

THE North Dakota Millers' Association will hold a meeting January 16 and 17 at the Columbia Hotel, Fargo.

AT Dundas, Minn., Jan. 2, the flouring mill of M. C. Newell & Co. was burned. Loss about \$15,000; no insurance.

THE Brooklyn Elevator and Milling Co. has been incorporated at Brooklyn, N. Y., with a capital stock of \$50,000.

AT Freeport, Ill., Dec. 30, Serf & Mitchell's flour and feed mills were destroyed by fire. Loss, \$15,000; insurance, \$7,500.

AT Mariette, Mich., Dec. 30, the roller process mill, owned by H. W. Wilson, was burned. Loss \$22,000; insurance \$10,000.

THE Farmers' mill at Preston, Minn., has been purchased by F. W. Miller who will make improvements and increase the capacity.

NEAR Unionville Md., Dec. 17, the Whitehill Mills were burned, together with contents. Loss not stated; insurance \$11,000.

THE annual meeting of the Iowa Millers' Association occurs Jan. 21 at 10 o'clock, a.m., in Room 1, Masonic Temple, Des Moines.

AT Juniata, Pa., Dec. 30, the steam flouring mill of J. E. Toomey was burned, with contents. Loss, \$8,000; insurance, \$2,000.

THE fourth annual meeting of the Nebraska Millers' Association will be held at the Windsor Hotel, Lincoln, on Jan. 15 and 16.

KANSAS State crop report shows that wheat in that State has improved 20 per cent since the rains, and the outlook was never better.

AT Templeton, Ia., Dec. 27, the elevator, office and warehouse of Montgomery Brothers were burned. Loss, \$20,000; partly insured.

AT Philadelphia, Pa., Dec. 17, the cooper shop of J. L. Helling, Harland st., below 19th, was discovered on fire and was damaged \$2,000.

AT Howard Lake, Minn., Dec. 27, the Howard Lake roller mill, C. W. Beniwell, proprietor, was burned. Loss, \$18,000; insurance, \$10,000.

J. M. Cranch, B. L. Fusen and M. L. Davy have incorporated the Bluffs Roller Mill Co. at Bluffs, Scott Co., Ill., with a capital stock of \$10,000.

AT Black Rock, N. Y., Jan. 7, fire destroyed Glor & Gridley's cooper shops on Churchill st. Three cottages were also burned. Loss \$10,000; fully insured.

AT Elkton, S. D., Jan. 1, Buck's grain elevator and contents were destroyed by fire. Loss about \$10,000; no insurance. The fire started in the engine room.

THE announcement is made that all arrangements for the acquisition of the principal flour mills in Canada by a syndicate of English capitalists is about completed.

AT Fergus, Ont., Jan. 6, John Black's elevator and adjoining barn were burned with all their contents, including 25,000 bushels of grain and 60 tons of hay. Loss, \$25,000; partly insured.

THE Smith Purifier plant at Jackson, Mich., was purchased by eastern parties for \$65,000, the only bid made, and will probably be converted into a factory for the manufacture of oil stoves.

LEO HEILPERN, the defaulting bookkeeper of the Columbia Mill Co., Minneapolis, Minn., was arrested at El Paso, Texas. He will be tried Jan. 26 on the charge of embezzling \$1,900 from his late employers.

AT Parkville, Mo., Dec. 20, the flouring mill owned by S. H. Graden, and operated under a lease by F. Gardner & Son, was burned. Loss on mill \$15,000; no insurance. Loss on stock, \$1,500; insured for \$1,200.

AT East Boston, Mass., December 23, the building of the New England Cooperage Co., corner of Chelsea and Manston sts., was gutted by fire. Loss on stock, \$12,000, and on building, \$3,000 to \$5,000; fully insured.

AT Bushnell, Ill., Jan. 15, the boiler in W. J. McGehe's feed mill exploded, demolishing the building. Alpha McGehe was badly scalded and injured about the head by falling timbers. Two other men were injured.

IN a suit brought by the American Biscuit & Mfg. Co., in the United States Court, at New Orleans, the Court gave a decision that as it was a monopoly, with the design of controlling the price of bread it had no standing in court.

AT a meeting, held in Chicago, Jan. 9, of the directors of the American Harvester Company, which a month or two ago was organized with the enormous capital of \$35,000,000, it was decided to discontinue the project on account of grave legal obstacles.

AT Sandusky, O., Jan. 10, Geo. Booth, aged 14 years, confessed that he had set fire to the elevator of the Cincinnati, Sandusky & Cleveland railroad which was destroyed by fire Dec. 11, and that he had fired the general offices of the company two days later. The elevator fire entailed a loss of \$100,000. No cause was assigned for the deed.

A SYNDICATE of Chicago, St. Louis, Galveston and local capitalists of Wichita, Kan., on Jan. 15, completed arrangements for the erection of elevator capacity, at Wichita, sufficient to take care of the coming crop which has every prospect of being the largest ever harvested in the State. The promoters of the deal are now asking Congress for a charter.

AT St. Louis, Mo., Jan. 2, fire occurred in structure on the roof of brick building corner Walnut and 20th sts., known as Camp Spring Mill. Small loss to structure. Machinery contained therein was damaged. There may be a serious loss on wheat by water in stories below. The machinery in mill building was slightly damaged by water. Cause, friction of machinery. Insured.

THE proposed draining of the lakes about Madison, Wis., is going to impair the water power of the Soughton Milling Co., at Stoughton, Wis.

The latter asks \$190,000 damages if the work is carried out as the drainage commissioners first planned to do it. The commissioners think they can complete the work, and by building a \$10,000 dam, avoid injuring the water power of the Stoughton millers.

S. G. BROCK, Chief of Bureau of Statistics, reports the total export of wheat-flour from the United States for the month of December, 1890, was 1,053,892 barrels, valued at \$4,853,747. The exports of breadstuffs for the same period represent a value of \$10,128,739, and the total exports of breadstuffs for the year ending Dec. 31, 1890, amount to \$136,845,899, an increase of \$10,966,840 over that of 1889.

ON November 21, 1890, the cooperage plant of D. W. Britton at Green Bay, Wis., was destroyed by fire. Suit is now brought, through his attorneys, against the Green Bay and Fort Howard Water Works Co. to recover damages resulting from the fire on the grounds of negligence on the part of the Water Works Co., which, it is claimed, did not supply sufficient water pressure, necessary to extinguish the flames. The action is unprecedented and the ground of a novel nature.

AT New Orleans, La., Jan. 9, fire broke out in the engine room of the Merchants' Rice Mill, Nos. 108, 110 and 112 Magazine st., extending to Constance st. The fire had its origin in No. 112, the mill proper. The mill proper was occupied by Emile Dabouval, Jr. On the ground floor were four pounders, one rough rice-shaker, some bran and polish and the engine and boiler. The second floor contained the stones and brushes, while the third the branscreens, ricescreens and shakers. The building and machinery were owned by Mrs. B. Saloy and were insured. The adjoining buildings, 108 and 110, also three-story brick structures, and owned by Mrs. Saloy, were used as a warehouse and contained a stock of rough rice in the rear and stock of clean rice in the front portion. The roof of No. 110 was partially destroyed, while the stock was badly damaged by fire. The stock in the other building was slightly damaged by water. Mr. Dabouval valued his stock at \$3,000, and carried insurance of \$2,000 in Home Company. Total loss \$8,000 to \$10,000.

THE grain dealers of St. Louis are indignant at the methods of grain inspection of the newly appointed State Grain Inspector O'Shea. Numerous cases of alleged overgrading of wheat have been reported on 'change, the most flagrant being made on the 14th inst. A few days previous to the charge being made, 20 carloads of wheat were shipped from Kansas City to East St. Louis. The Merchant's Exchange inspector at the latter place examined the wheat and graded it as No. 2 hard. On the 12th inst. the wheat was sent to St. Louis and fell into the hands of the State Grain Inspector, who took a different view of the situation and pronounced the wheat to be No. 2 red, the effect of which would be to put a large sum of money into the pockets of the shippers at Kansas City, as the wheat seemed to have immensely improved by its trip across the big bridge from Illinois to Missouri. The millers who were to receive the wheat strongly objected to taking it at the State Inspector's rating. St. Louis grain dealers will force an investigation and quite a sensation is promised.

AGAIN the Oatmeal trust is trying to engage in active business. Mr. Ferdinand Schumacher presented plans for an organization to the meeting of eleven interested gentlemen at the Oatmeal Milling Company's office, Chicago, Jan. 13. There were present: H. P. Crowell, of the Quaker Milling Co., Ravenna, O.; C. R. Newell, of Newell Bros., Cleveland, O.; Otis Hower, of Hower Bros., Akron, O.; S. Coldson, of the late Oatmeal Co., of Iowa City, Ia.; G. B. Douglass, Roberts and Stuart, of the Meal Milling Co., of Cedar Rapids Ia. and Chicago. President Ferdinand Schumacher and Directors Barber, Allen and Crouse, of the F. Schumacher Mfg. Co., of Akron, O. The A. M. Johnston Oatmeal Co., of Rockford, Ill., is in the deal, but was not personally represented. The mills represented are said to contain 85 per cent of the entire product, and have an aggregate value of \$2,500,000. It is proposed to organize the American Cereal Co. with a capital stock of \$5,000,000. The stock is to be issued to the eight mills represented, in such proportion as agreed upon, and the new company is to become the absolute owner of all plants, brands and products of these mills. It is also proposed to locate the new company's headquarters in Chicago, and operate such of the mills as the market warrants.

WADHAMS OIL AND GREASE Co. of Milwaukee, Wis., and Seattle Wash., notify us that they have the exclusive agency for the entire North-west, for Swift Lubricators and the well-known Magnolia Anti-friction Babbitt Metal. See advertisement on first page.

SLOW-BURNING CONSTRUCTION.

By EDWARD ATKINSON.

FROM an article on this subject in the *Century*, we quote the following extracts: What, then, is the slow-burning construction? It consists simply in consolidating the wooden material in frame, floor, and roof in such a way that a fire can be held long enough in any room in which it may originate for a fairly competent fire department, public or private, to get it under control, or where it may be extinguished or held in check by sprinklers. The timbers used may be solid or may be cut in two parts to be bolted together. The latter is perhaps the better way, in order that the air may reach the center of the timber and season it, great care also being taken in mill practice not to paint, oil, or varnish the outside of any heavy timber for at least three years after it has been placed in the building, lest what is called dry rot should occur from the fermentation of the sap in the green timber. Where an outside finish is required some architects use the timbers in two parts bolted together, with an air space between; each timber being also bored through the center lengthwise for ventilation. This latter plan is the customary method with posts when wood is used for supports, a crossway hole being also bored near the top and bottom, connecting with the center. Upon these heavy timbers—which are commonly placed eight or ten feet on centers resting directly on properly adjusted posts without the interposition of any girders lengthwise of the building, in lengths or spans from eighteen to twenty-two feet—the floors are laid of plank not less than three inches thick when the beams are eight feet on the centers. If the beams are ten feet or even twelve feet apart on centers, ordinary weights will be carried by floors consisting of four-inch or five-inch plank; the timbers themselves may be from fifteen to not exceeding twenty-two feet in length from wall to post and post to post, for ordinary factory loads. If provision is required for extraordinary loads, a special computation should be made to meet the case. If a fine finish is desired, sheathing may be placed underneath between the timbers, nailed close to the under side of the plank; if the most absolute security against fire is called for, the finish may consist of plastering laid on wire lathing close against the plank. This plastering may be carried around the outside of the timber on the line of the timbers, provided no skim coat of lime putty is put upon the plastering, thereby cutting off the air from the timber. The top floor may be laid directly upon the plank, or a layer of mortar may be laid between the plank and the top floor; in some cases asbestos paper has been interposed. The layer of mortar offers great security in preventing the passage of fire downward. The roof which has been described corresponds substantially to the floor, to wit: three-inch plank laid upon the timber, one-inch sheathing on the under side if desired, and sometimes one-inch boarding on the plank; then the ordinary outer covering of whatever kind may be adopted. If the roof is exposed to great humidity within, as in the machine-room of a paper-mill, one inch of mortar may be interposed between the roof boards and the plank. This latter roof proves to be impervious to cold or heat, and with proper means of ventilation gives se-

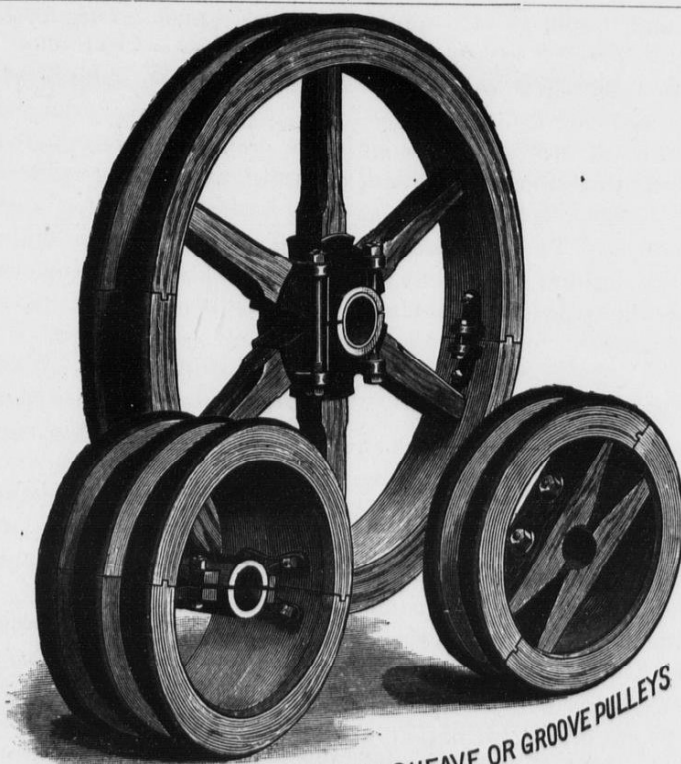
curity against any possible condensation of moisture from the atmosphere within.

If the building is over one story in height, the stairways ought to be placed either in separate towers outside the building proper or else in the corners of the building surrounded by brick walls, the doorways being protected by adequate fire-doors consisting of wood encased in tin, iron being one of the most teacherous materials customarily made use of for the protection of doorways in party walls. In such a factory no cornice is required or permitted, and no sheathing within set off by furrings from the wall can be tolerated. No concealed space is allowed anywhere in which a fire can pass from room to room or from cellar to attic. Every part of the building must be open so that water from bucket or hose can be thrown anywhere.

If these plans and specifications are compared with the ordinary method of combustible architecture, the reason will be apparent why textile factories, paper-mills, and other works are better fire risks and are insured at less cost than the average stone church, brick hospital or asylum, or iron warehouse, although the nature of the work done carries with it almost every cause of fire hazard from ignition, friction, or spontaneous combustion, while in many cases the material used is almost explosive.

HICKORY PULLEYS FOR ROPE TRANSMISSION.

WITH the extensive pulley business of the Menasha Wood-Split Pulley Co., of Menasha, Wis., the manufacture of



MENASHA SHEAVE OR GROOVE PULLEYS

Rope Transmission Pulleys has become an immense industry.

It seems that the rims of these pulleys being made so that the grain of the wood follows around the pulley leaves the surface and groove very smooth and prevents abrasion or wear of the rope, which is a very desirable thing in transmitting power by rope. These people also have men out putting up this kind of Drive, and take the contract to put up the work complete ready to run.

We show illustrations of these pulleys this issue.

OUR LEGAL DEPARTMENT.

Specially prepared for The United States Miller and Milling Engineer, from the latest decisions.

PURCHASE OF EXCHANGE BY CHECK.—The purchaser of foreign exchange by a depositor in a bank, from the bank on which he gives his check in payment

for the exchange, he having sufficient funds on hand with the bank to meet the check is a transaction in which the depositor is a purchaser of negotiable paper for value, and no equities existing between the drawer and the payer can be set up against the bill so sold. The acceptance of a check by a bank is an absolute discharge of the debt of the bank to the depositor, to the extent of the check, and as such amounts to a parting with value on the part of the maker of the check.—*Mayer v. Heidelberg, Court of Appeals of New York, 25 N. E. Rep., 416.*

ACTION FOR WAGES—EXTRA TIME.—Where one had formerly been in the employ of another under a written contract, by which he agreed to and did work at a given price per day, waiving all claim for extra time—and afterwards made a verbal agreement for a position a second time and no mention was made of over-time, and when he has accepted his payments and given his receipt without making a claim at that time, but acknowledged full satisfaction therefor, he cannot recover under a statute making a certain number of hours a day's work for time worked in excess of the statutory day.—*Bartlett v. Street Ry. Co. of Grand Rapids, Supreme Court of Michigan, 46 N. W. Rep. 1034.*

INJURY TO SERVANT BY NEGLIGENCE OF MASTER.—Where an employer negligently provides his workmen with improper and unsafe apparatus with which to perform the work, and the workman, without any fault on his part, is injured owing to the employer's neglect to provide suitable, safe and proper appliances, the employer is liable for the injury.—*Union Pac. Ry. Co. v. Broderick, Su-*

pressed therein, and the owner and holder of it at its maturity may hold the endorsers liable in case of dishonor.—*Carnwright v. Gray, Supreme Court of New York, 11 N. Y. Rep. 276.*

RESCISSION OF CONTRACT FOR SALE OF GOODS FOR FRAUD.—In order to entitle one to rescind a contract for the sale of goods because the purchaser bought them without intending to pay for them, it must be shown that the intent was formed and acted upon at the time the goods were bought. And where a merchant in failing circumstances, who knew he must fail but could not know just when he would be obliged to stop payment, the presumption is great that he knew he could not pay for them at the maturity of the bill, and therefore he may be said to have bought them without intending to pay for them.—*Whitten v. Fritzwater, Supreme Court of New York, 11 N. Y. Supp. 297.*

BREACH OF CONTRACT FOR THE SALE OF GOODS.—Where a firm engages with a mill for the manufacture of a specified quantity of goods, to be delivered in partial lots from time to time, and agrees to give its note for each lot at delivery thereof, the failure to pay one of the notes at maturity is such a breach of the contract on the part of the purchaser that the manufacturer is justified in canceling the remainder of the order, and he may recover for the goods actually delivered, without completing the contract on his part.—*Kokomo Straw Board Co. v. Inman, Supreme Court of New York, 11 N. Y. Supp. 328.*

CONSTRUCTIVE WAIVER OF ADDITIONAL INSURANCE CLAUSE.—Where a policy of insurance provides that additional insurance procured without permission therefor, also provides no agent has power to waive any conditions of the contract, the procuring of additional insurance after the policy is issued, without permission therefor, the fact that it is procured through the agent of the company does not amount to a waiver, as the agent had no power to waive the provision which was broken.—*Hess v. Washington F. & M. Ins. Co., Supreme Court of New York, 11 Supp. 299.*

RESCISSION OF SALE OF GOODS FOR BREACH OF WARRANTY.—Where goods are ordered to be manufactured, and the contract provides the specifications which shall be conformed to, the buyer waives any defect in them which would be apparent upon investigation at the time of acceptance, if he accepts them, without objection, and having accepted them he will not be heard to object that they were not in conformance with the contract, as a matter of defense to an action for the price of the goods.—*Smith v. Servis, Supreme Court of New York, 11 N. Y. Supp. 301.*

INJURY TO EMPLOYEE ON FREIGHT ELEVATOR.—An employee who goes upon a freight elevator for the purpose of saving himself from walking up stairs, voluntarily assumes the risks attendant thereon, and if injured he cannot recover from his employers except for gross carelessness. It cannot be said to be gross carelessness for a business firm to use a freight elevator without a safety-clutch, where the absence of it was not known to them, and in the ordinary use of the elevator they would not be likely to notice such defect.—*Hansen v. Schneider, Supreme Court of New York, 11 N. Y. Supp. 347.*

RELEASE OF LIABILITY IN TELEGRAPH BLANK.—The agreement in a telegraph blank that unless the message is repeated the company shall not be held liable even for the negligence of its employees,

preme Court of Nebraska, 46 N. W. Rep. 1121.

ADDITIONAL INSURANCE.—Where a policy of insurance provides that it shall be void if other concurrent insurance shall be taken out without notice to the company and endorsement of permission on the policy, the taking of other insurance through the agent for the company which issued such policy cannot avoid it, as the knowledge of the agent is constructive notice to the company.—*Hagan v. Merchants & Bankers Ins. Co., Supreme Court of Iowa, 46 N. W. Rep. 1114.*

PRESUMPTION OF CONSIDERATION FOR NOTE.—Under the Statute of New York a note which does not contain words of negotiability or words expressing the fact that it is founded upon a consideration, or expressed to be "for value received," is nevertheless payable as ex-

is void as against public policy. The company cannot, by any agreement with the sender of a message, escape liability for the negligence of its employees, as that is a responsibility imposed upon it by law and not by contract.—*Western Union Telegraph Co. v. Short*, Supreme Court of Arkansas, 14 S. W. Rep. 649.

IS THE MCKINLEY BILL VOID?

MARSHALL FIELD & CO., Chicago's millionaire merchants and importers, have commenced an action whose object is to have the new tariff schedule, known as the McKinley bill, declared null and void. Ever since the passage of the measure there has been a good deal of talk of this kind, and some little action has been taken in the East, all of which came to nothing.

The men who constitute the firm and guide the business of the great house in question are very far from being visionary, as their brilliant past sufficiently attests, and this movement on their part from that circumstance attracts world-wide attention. We quote some of the reasons given by the firm's attorney for holding the act invalid; they may or may not be well founded, but in view of the great attention given to the subject on every hand, and the enormous pecuniary interest involved, are well worth considering:

"1. Because the so-called act approved Oct. 1, 1890, entitled 'An act to reduce the revenue and equalize duties on imports and for other purposes, has not become a law, it never having been legally enacted, as required by the provisions of article 1, section 7, of the constitution of the United States.'

"4. Because said bill as passed by the House of Representatives and the Senate contained a certain section providing for a rebate of internal taxes on manufactured tobacco and snuff, which was not contained in the engrossed copy of said bill presented to the President and approved by him.

"5. Because the first five paragraphs of schedule E, section 1, of said so-called act, providing for bounties to producers of American sugar (paragraphs 231 to 235), are unconstitutional and void, no power to enact legislation of this character having been vested in Congress by the constitution.

"6. Because section 3 of said so-called act is unconstitutional and void, in that it delegates to the President the power of laying taxes and dues, which power, by sections 1 and 8 of section 1 of the constitution, is vested in Congress."

To declare this act null and void would work no end of injury to the country, unsettling the values and destroying confidence, but nothing is to be gained by closing our eyes to this matter. A large number of lawyers, some of them of high standing, are of the opinion that the points are well taken, while perhaps as many take the opposite view. Among the latter is Judge Lyman Trumbull, himself a low tariff man, and a constitutional lawyer of great ability. Developments will be eagerly watched by millions of people.—*Chicago Journal of Commerce*.

BREAD IN JAPAN.

TO many who have been eating bread all their lives and have always heard it spoken of as the staff of life, and to whom life would hardly be worth living without it, it may seem strange to talk of flour or bread being introduced and growing in

favour; but they must remember that the greater part of the millions of Chinese and Japanese have always used rice in place of bread, and have found it the staff of life, and it has been claimed by many that it would be as impossible to induce these people to abandon rice in favor of wheaten bread as it would be to induce us to substitute rice for bread.

Failure of the rice crops, and consequent famine in China and Japan, have been the means of introducing flour into those countries more rapidly than anything else could have done.

Most remarkable is the universal favor that bread and similar floury concoctions are beginning to enjoy. This article of food has also been completely Japanized and sells in forms unknown to Westerners. Tsuke-pan, sold by peripatetic vendors, who push their wares along in a tiny roofed handcart, is much liked by the poorer classes. It consists of slices—thick, generous slices—of bread dipped in soy and brown sugar and then fried or toasted. Each slice has a skewer passed through it, which the buyer returns after demolishing the bread. One cannot speak highly of this bread. The dough is heavy and the color an unhealthy yellowish gray. But the best Japanese flour is equal, we are told, to California No. 3, which is high praise, indeed. Flour is now used in many other ways besides the manufacture of simple bread. There is Kashi-pan, cake-bread, which is sold everywhere. As the name implies, it is a sort of sweet breadstuff made into cakes of various sizes and artistic figures, according to the skill and fancy of the baker. To a European palate this Kashi-pan is rather dry and tasteless—"too much crumb," as the precious youth said of Sairey Gamp. But it is very cheap, and for five sen one can get a huge paper bag full. Kasuteira, or sponge cake, is not so much sought after as it used to be. Yet some bakeries, such as the Fugetsu-do and Tsuboya, excel in producing the lightest and most delicious of sponge cake.—*British and Foreign Confectioner*.

A NEW DICTIONARY.

The general object in referring to a dictionary is to find one or more of three things about a word: (1) its correct spelling, (2) its correct pronunciation, (3) its most common present meaning. To enable one to get this information with ease and certainty it is desirable to have a work in which is combined simplicity, accuracy and comprehensiveness. From our examination of sample pages we believe a work of this kind will soon be published by Funk & Wagnalls, 18 and 20 Astor Place, New York, under the title of "Standard Dictionary of the English Language," in the preparation of which they have made several departures from the usual methods of lexicographers, and have added several features not used heretofore. The illustrations are numerous and excellent.

FOREIGN ITEMS.

CONCERNING the harvest in South Australia, an Adelaide letter, under date of Nov. 26., says: Reaping is now in full operation in the northern areas, and while red rust is prevalent it is to be hoped the season is too far advanced for any extensive loss to occur. In some parts locusts are hatching in large numbers; but while they are too late for the crops in the north, it is possible

they may endanger those not so far advanced. However, with these drawbacks, we anticipate a yield equal to that of last year, say, an average of eight bushels, or an exportable surplus of about 350,000 tons.

FROM Glasgow, Scotland, Messrs Dunlop Brothers send their annual review from which we quote as follows:

In passing to a review of the course of the market during the past year, it falls to be recorded that, as in 1889, there has happily been an exemption from foreign political excitement, and the import of all articles of the trade from the principal producing countries has been uninterrupted. But if we have had peace abroad, there have been labor and financial troubles at home, causing much unrest, and tending to repress expansion of business. In the earlier months of the year, as if following a rigid rule (characteristic of the past three or four years), trading was on a restricted scale. Supplies during this period, particularly of flour, were in excess of requirements, and prices drooped. Not till April did the trade show improvement. In the middle of that month reports of damage to the growing American winter wheat crop awakened anxiety, leading to renewed activity and better prices. Some reaction followed in the succeeding summer months. Towards the end of July, and in August, the unfavorable weather here and in America (now compromising the spring wheat crop also) stimulated the market, wheat acquiring 1/6 to 2/ per boll, (4 bushels) and flour 2/ to 3/ per sack advance. American shippers, indeed, at this juncture expected the season would shew no exportable surplus. Russia, the Danubian principalities, and Hungary, on the other hand, were more highly favored, promising an abundant supply. Manitoba, too, had a very large and handsome crop upon the ground. These circumstances, together with abnormally low Atlantic freights, combined to counteract the adverse outlook in the States. In the beginning of September the condition of our home crops fortunately underwent a complete change for the better. While the wet summer had injured the potato badly, the effect upon the cereal crops of England and Scotland was quite neutralized by the subsequent brilliant autumn. The home requirements being on the ordinary scale, and the quantities afloat quite up to usual volume, there has been since harvest no special anxiety about future supplies, except in the case of Indian corn, the deficiency on which seems to have been apparent to those most interested. The city millers have been specially busy during the most of the year, having had great variety of wheat at their command, and with admirably equipped mills. It was matter of regret, however, that the promise of fine hard wheat from Manitoba was doomed to disappointment, inclement weather on the eve of harvest modifying, if not altogether upsetting the expectations from that country. The financial crisis of November has so far been little felt in the Glasgow corn trade, and it has been spared such failures as have occurred in Liverpool and the north of Ireland. Our bakeries have been fully occupied, and bread, although one of the cheapest of the necessities of life, has maintained a range of price remunerative to the producer.

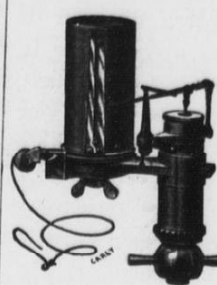
Although it may be vain to attempt to forecast the future of the market it is noteworthy that much un-

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125-bbl. roller flour mill, 4 stories, frame with stone basement, including plenty water power for 4 water wheels. Flume, dam and mill in good condition. Frame warehouse and office close by, and long sheds for farmers' teams. The whole property in full operation 16 hours daily, doing profitable business. Has big grist business. City of 2,000 population; two railroads. Good trade with citizens, farmers and lumber men, for flour, feed and rye. Good local grain, and plenty of it. Good place to live, has good schools and churches, and close to other large cities. Owner non-resident, which is reason for selling. Address,

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certainly still remains as to America's surplus. Her wheats are practically indispensable here, and it is significant, that while supplies of No. 1 northern and lower grades have been fairly liberal, there have been, up to this point, no receipts of strictly No. 1 hard Duluth, the spot stock of which is rapidly disappearing. The higher qualities of Russian and Danubian wheat likewise are into narrower compass. It may not be too much to expect that some enhancement of value to present holders should result from the causes we have indicated, as well as from the resumption of buying which will naturally follow the absence of demand that has marked the closing weeks of 1890.

ALL persons desiring to reach the entire milling and grain trade of America, by circular or otherwise, should obtain a copy of CAWKER'S AMERICAN FLOUR MILL AND GRAIN ELEVATOR DIRECTORY FOR 1890-91.

A LESSON FOR LAGGARDS.

You think of taking a journey some day;
You have talked it over for years and years;
Yet somehow or other you make delay,
Until further and further away appears
The beautiful goal; and I tell you now
To bind yourself by a solemn vow
To cross the Rubicon. Pluck up heart!
For you'll never get there unless you start!

There looms before you from day to day
A task that you dread to undertake;
So it hangs like a cloud upon your way
Through which the sunshine can never break.
And I tell you now that the better plan
Is to do the work as quick as you can:
Over your fears a victory win.
For you'll never get through if you don't begin!

With the bravest and busiest keep abreast,
Nor through love or indolence loose your place.
For in each endeavor to do your best
You raise the hopes of the human race.
Be not content to grovel below,
But rise to your duties with faith aglow!
Let your aims be high, and strive to excel;
For he who does better must first do well!

The heart that gives way to its doubts and fears,
That idly dreams when there's work to do,
Will find itself, before many years,
Beggared and bankrupt through and through.
There are journeys to take and tasks to be done,
From early morning till set of sun,
And triumphs to win, as none can deny,
And you'll never succeed unless you try!

—Josephine Pollard, in N. Y. Ledger.

MILWAUKEE ITEMS.

THE Pabst Brewing Co. will expend over a million dollars in improvements during the year 1891. Among them are a new hotel, several office buildings in prominent locations, additions to various departments of their brewing plant and a large repair and millwrighting shop.

THE Schlitz Brewing Co. will erect another immense malt house. The Pring & Rau Mfg. Co. have the contract for the machinery.

HON. Henry Smith recently received the sad intelligence that his brother F. A. Smith of Salinas, Cal. had dropped dead there. The deceased was for many years a resident of Milwaukee and was engaged in millwrighting with his brother Henry and George.

A SCHEME FOR CHEAP POWER.

A French engineer in a recent paper proposes a scheme for cheap power by having gas and steam in the same cylinder. By this scheme he claims to be able to produce motive power by using a combustible gas, employing the heat generated by its explosion to generate steam, and the vapor of ammonia. When the gas has operated on the piston it escapes at a temperature of about 400 degrees into a generator, where steam is produced, which is used to act upon the opposite side of the piston from the gases. There are two advantages claimed for this—the high temperature due to combustion of the gas prevents cylinder condensation, and the steam assists in lubrication. The completed machine for which this claim is made will consist of two cylinders, one making its forward stroke under the action of the explosive gases, and its return stroke by the action of the steam; the other is operated entirely by vapor of ammonia. Under these conditions, says M. Tellier, there can be no doubt, theoretically that 44 pounds of coal per horse power per hour is an economy which can be secured.

BREAD MADE FROM ROOTS.

George H. Harris, of Rochester, New York, has for some years been investigating this matter, and writes: "Among the wild roots used by the western Indians was one variously termed prairie potato, or bread root. The Sioux called it wild prairie turnip. The French named it apple of the prairie, or turnip of the prairie. Others called it Indian turnip, or bread root. These roots grow on high and dry prairie ground, one or two together, from four to six inches below the sur-

face. The Indian women usually dig them with pointed sticks. They are about the form of a hen's egg, and vary in size from that to a goose egg. They have a thick brown envelope, similar to the outer peel of an onion, of a tough, leathery nature, that is easily separated from the interior, or food portion, which is smooth. It can be boiled and mashed like a turnip. It is usually split open or cut into two thin strips and dried for future use. In this state it resembles pieces of chalk. It becomes friable when dry, and is readily ground into a light starchy flour that makes a very palatable and nutritious bread. The taste is like that of the Swede turnip.

HOW AN ELECTRIC CAR IS MOVED.

THE dynamo which generates the current does so by the revolution of a coil of wire near the poles of a magnet, the force which revolves the coil being derived from the engine. The current then passes over the wires, down the trolley which surmounts each car, to a small motor. This motor has an armature consisting of coils of wire traversed by an electrical current, which is attracted in succession to the poles of the stationary coils called the field magnets, through which the current also flows, flies around, and transmits its motion, by means of cogwheels, to the axle of the car. The driver of the car, by use of a lever, turns the current into the motor beneath the car, or diverts it to the rails at will. In the conduit system the current passes along the wire, with which connection is made into the motor on the car, and then out through the wheels to the rails, and then back to the central dynamo.—Engineering.

CHARACTER IN SHOES.

"Do you know that an old shoe is a good index to the character of the person who wore it?" said a salesman in a sixth avenue shoe store to me the other day. "I have been in the business close on to twenty years, and have observed the matter closely. A person who wears a sole and heel on the outside toward the rear is of a passionate temperament, one who is generally enthusiastic, and one who does whatever he undertakes in a rapid manner. Such persons I have found, are not successful in accumulating money. An evenly worn shoe indicates an easy-going person. But if the toe end is badly worn, look out for the wearer. 'Shady' people and mostly all criminals wear out the toes of their shoes first. Why? Because, as a rule, 'crooks' glide along on their toes. A person of little ambition wears a shoe on the inside. He lives contentedly, and is little concerned as to the morrow. If married, he has a large family. If the whole heel is badly worn, the person is full of resolution and determination, is buoyant to the point of brusqueness, and is possessed of ability to both make and save money.—New York Star.

PRACTICAL RECIPES.

THE GERMAN REMEDY FOR BURNS.—The celebrated German remedy for burns consists of 15 ounces of the best white glue, broken into small pieces in two pints of water, and allowed to become soft; then dissolve it by means of a water bath, and add 2 ounces of glycerine and 6 drams of carbolic acid; continue the heat until thoroughly dissolved. On cooling, this hardens to an elastic mass, covered with a shining parchment like skin, and may be kept for any length of time. When required for use it is placed for a few minutes in

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A 25 horse-power Reynolds Corliss engine, with 40 horse-power boiler and heater and connections, all in first-class condition and in use at present. A bargain for anyone in need of same. Reason for selling, more power required. For further information address,

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a water-bath until sufficiently liquid, and applied by means of a broad brush. It forms in about two minutes a shining, smooth, flexible and nearly transparent skin.

A new cement for securing iron into stone is described in some of the foreign papers. The cement is made by melting resin and stirring in brick dust, which must be finely ground and sifted until a sort of putty is formed, which, however, runs easily while hot.

ANYONE can make the hand-grenade fire extinguishers, and at small fraction of the prices charged in the market. Any light quart bottle will serve to hold the solution, which is composed of 1 pound of common salt, one-half pound of sal-ammoniac, dissolved in about 2 quarts of water.

At the Wisconsin Agricultural Experiment Station, two feeding experiments, for the purpose of ascertaining the value of ground oats and of bran for milch cows, were conducted during the last year. Two cows were used on the first experiment, and four on the second one. The cows were fed the same quantities by weight, of oats and bran, 8 lbs. daily per head on the first experiment, and 10 lbs. on the second, and in addition the same fundamental ration of corn meal, hay, and corn silage or fodder corn. The effect of similar weights of oats or bran in a ration for milch cows was thus studied. It was found that the cows invariably did better on oats, going up in milk yield when feeding on oats and going down when bran was fed, while the fat content of the milk remained the same on an average.

RECENT MILLING PATENTS.

The following is a list of patents relating to Milling and Grain-handling appliances granted during the month of December, as specially reported for the U. S. MILLER, by Chas. E. Brock, Patent Attorney, Pacific Building, Washington, D. C.:

No. 441,658, Automatic grain-scales, T. F. Gray, Monroeville, O.
No. 441,702, Safety device for mills, G. Ries-
eck, Allegheny, Pa.
No. 441,912, Grain tally and register, S. R. Wheeler, Detroit, Mich.
No. 442,006, Crushing-roll, H. C. Behr, San Francisco, Cal.
No. 442,051, Cockle-separator, F. W. Howell, Buffalo, N. Y.
No. 442,086, Machine for breaking shelled corn, A. Ball, Claremont, N. H.
No. 442,134, Grain-meter, F. Orr, East Springfield, Ohio.
No. 442,202, Flour-chest, L. Ritchie, Fair Haven, Minn.

No. 442,212, Middlings-purifier, G. Walter, Grand Forks, N. D. This covers the combination of an upright shaft, means for rotating said shaft, a sieve supported upon said shaft, a cam upon said shaft, means of rotating said cam independently of said shaft, and means of connecting said cam with said sieve, whereby said sieve will be given both a rotary and lateral movement when said shaft and said cam are rotated.

No. 442,371, Bran-packer, N. C. Gauntt, Bowling Green, Ky.

No. 442,537, Bag-holder, A. P. O'Brien, Richmond, Va., assignor of one-half to A. D. Ledoux, same place.

No. 442,711, Regulator for grain scales, F. H. Richards, Hartford, Conn., assignor to the Pratt & Whitney Co., same place.

No. 442,712, 442,713, 442,714, 442,717, 442,719, 442,720, Grain-weigher, 442,715, 442,716, Regulator for grain-weighers, and 442,718, Grain-meter, all patented by F. H. Richards, Hartford, Conn., and assigned to the Pratt & Whitney Company, same place.

No. 442,722, and 442,723, Grain-weighers, patented by C. H. Cooley, Hartford, Conn., assigned to the Pratt & Whitney Co., same place.

No. 442,724, Grain-weigher, C. H. Cooley and F. H. Richards, Hartford, Conn., assignors to the Pratt & Whitney Company, same place.

No. 442,766, Feed regulator for roller mills, D. Brennan, jr., Bayonne, N. J.

No. 442,805, Grain-cleaning machine, G. A. Gilbert and W. Richardson, Milwaukee, Wis., said Richardson assignor to said Gilbert.

No. 442,848, Grinding-mill, G. A. Young, Brooklyn, N. Y.

No. 442,859, 442,860, 442,861, Grain-weighers, C. H. Cooley and F. H. Richards, Hartford, Conn., assignors to the Pratt & Whitney Company, same place.

No. 442,924, Ventilator for carriages or moving vehicles, A. W. J. Swindells, W. S. Peel and G. F. Freeman, Manchester, Eng.

No. 443,139, Feed-regulator, W. Gribben, Crosswell, Mich., assignor of one-fourth to J. M. Gage, same place.

No. 443,143, Combined corn sheller and cutter, S. Loree, Cincinnati, O., assignor of one-half to J. Loree, Lincoln, Nebr.

No. 443,180, Grain-weigher, F. H. Richards, Hartford, Conn., assignor to the Pratt & Whitney Company, same place.

No. 443,295, Grinding-mill, L. Poulin, Gunder-
son, Mont.

No. 443,366, Grain-cleaning machine, A. Laid-
law, Toronto, Canada.

No. 443,372, Grain scourer and cleaner, A. Moore, Toronto, Canada.

No. 443,485, Grinding-mill, A. Cameron, Chicago, Ill., assignor to F. C. Sustin.

No. 443,569, Grain-weigher, C. H. Cooley, Hartford, Conn., assignor to the Pratt & Whitney Company, same place.

No. 443,583, Grain-weigher, F. H. Richards, Hartford, Conn., assignor to the Pratt & Whitney Company, same place.

No. 443,718, Grain-weigher, F. H. Richards, Hartford, Conn., assignor to the Pratt & Whitney Company, same place.

No. 443,933, Grain-weigher, C. H. Cooley and F. H. Richards, Hartford, Conn., assignors to the Pratt & Whitney Company, same place.

REISSUE.

No. 11,132, Middlings-purifier, H. W. Stone, jr., Morris, Minn.

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The Winter Resorts of Florida and the Sunny South.

At no time in the history of southern travel have the indications pointed to so brilliant a season at the Winter Resorts of Florida and the South as is promised for 1890-91. At Jacksonville, St. Augustine, and along the Indian River extensive preparations have been made for the entertainment of northern guests, and all visitors can rest assured of the old-time hospitality for which the southern host is famous. With its customary enterprise, the Big Four Route, "The Great Florida Line," has placed on sale round-trip tickets at greatly reduced rates, and made special preparations to handle the southern tourist business. All persons contemplating a trip to Florida should ask for tickets via that popular line. Solid vestibule trains run daily between Chicago and Cincinnati, equipped with private compartment buffet sleeping-cars, and elegant parlor cafe dining-cars, lighted by gas and heated by steam, making direct connection in Central Union Depot at Cincinnati with through trains for all points in the South. Ask for tickets via the Big Four Route.

D. B. MARTIN,
General Passenger Agent,
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INDIAN CORN IN FRANCE.

MAIZE is hardly known as an article of food in France. As a crop, it does not thrive well there, and those who do eat corn, eat Spanish or native corn, which is not palatable. Consul Griffin writes from Limoges that "if corn meal could be introduced as an army supply its adoption would prove advantageous to the soldier. The bakers would find a greater profit in mixing meal with rye flour, thus producing a lighter and more digestible bread. Were American corn so introduced, a lasting favor would be conferred upon the poor French peasant and workman, as well as an outlet for the over-production of the American farms. A very simple way to reach these country people with this valuable product, would be to follow the fairs, which are held monthly or bi-monthly in nearly every canton of France. There let American corn in different ways be prepared and cooked before their eyes; let the people taste it, handle it, and find out how easily it can be cooked and how cheaply it can be bought. I would say that from personal experiments, medical and other professors who never before had eaten of American corn (but thought corn was only a food for cattle and fowl) after tasting it prepared in the different ways we have it in the United States, declared it not only wholesome and nutritious but delightful to the palate."

The corn crop in France in 1888 was 7,000,000 metric quintals of 220.47 pounds. The average price is nearly 20 francs a quintal. The import of foreign corn is 4,800,000 metric-quintals, of which 2,000,000 are from the United States and 1,600,000 from Roumania. The consumption is put at 4,037,000 quintals, 2,000,000 in distilleries, 2,100,000 are fed to animals and the remainder is used in starch factories. The transportation companies in Paris use great quantities for food, and declare that a tax on corn would force them to raise their prices. The French Senate after a long debate finally voted in favor of a duty of 3 francs on corn, and supplemented this by imposing a duty of 6 francs on corn meal. During the debate it was distinctly avowed that the duty on corn was to be considered only a continuation of the policy toward American pork. Comte Careil declared that the importation of American pork was only another mode of importing American corn, and French farmers could not maintain themselves against it. The prohibition of pork was right and ought to be maintained, and the duty on corn should also be made prohibitive. The farmers who raise beets favor a duty on corn, while the distillers are opposed to it.

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Under present arrangements Pullman sleeping cars and furnished tourist sleepers are run via the Wisconsin Central, and Pullman Palace Sleepers via the Chicago, Milwaukee and St. Paul, and Northern Pacific from Chicago through to the Pacific coast without change.

In addition to this service the Northern Pacific runs on its through express trains regular day coaches, dining cars and free colonist sleepers from St. Paul to Tacoma and Portland.

The Northern Pacific line allows the holders of second class tickets to stop at Spokane Falls, Wash., and at all points west thereof, ten days at each place desired. This will enable settlers to thoroughly examine all lands in the new State before selecting a permanent location. No other line offers holders of second-class tickets an opportunity of examining all sections of this Great State without the payment of additional fares of from \$5.00 to \$20.00.

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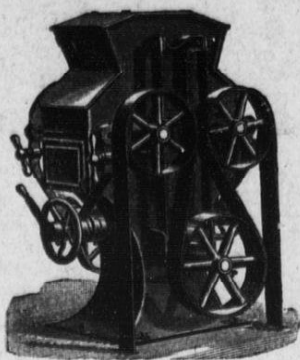
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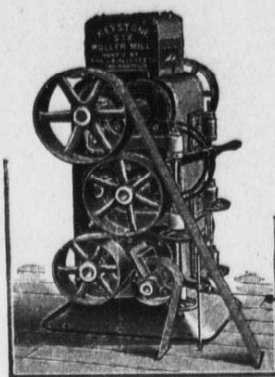
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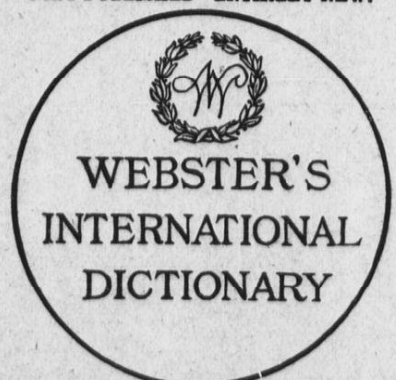
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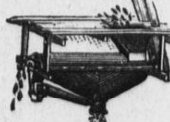
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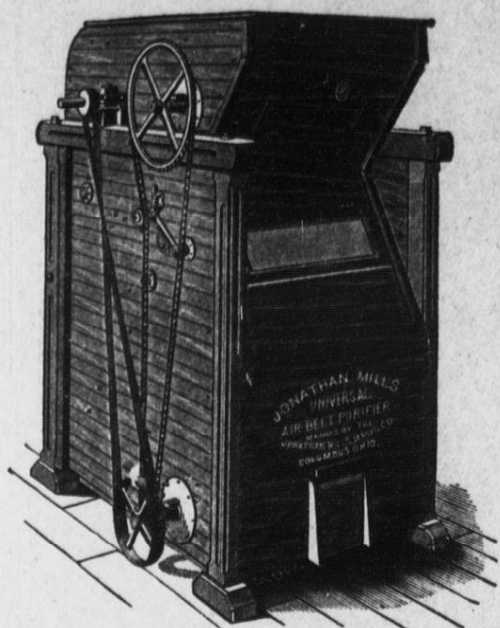
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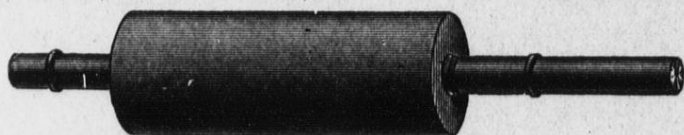
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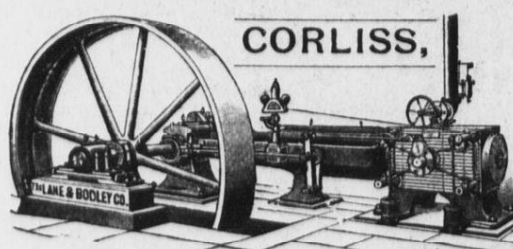
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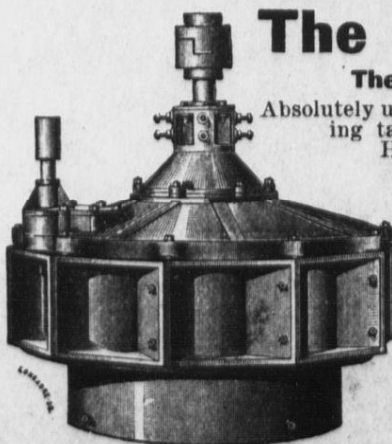
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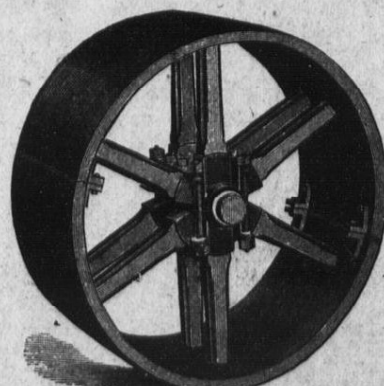
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